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CHINA AND MODERN MEDICINE

A STUDY IN MEDICAL MISSIONARY DEVELOPMENT

BY

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TO

MY WIFE

AND

MY TSINAN COLLEAGUES

PREFACE

By Sir Donald MacAlister, K.C.B., M.D.

In these unrestful times, when faith is apt to faint and love to wax cold, the story unfolded in this book will come to many a perplexed Christian as a stimulus and a challenge. The social and religious dispeace in Western Christendom is to many hearts a burden "almost not to be borne." Even the brave are daunted and the wise are baffled by the outlook. The believer in the Fatherhood of God and the Brotherhood of Man is hard put to it to vindicate his creed. He knows that for lack of that vision the peoples are perishing about him, but for the time he feels powerless to reveal or revive it. He shrinks from pessimism, but he has to admit that the pessimist's gloom is not without a cause. It is the dark hour indeed, and he wonders whether any dawn is at hand.

Let him turn for a while from his misgivings for Europe to the history of Christian medical missions in China, as it is set forth in the following pages, and he will take heart again. A hundred years ago no human enterprise could have seemed more hopeless than the physical and spiritual transformation of China. Millions were in soul

and body sick unto death; but the science of healing was unknown, while its native practice was discredited, and indeed discreditable. Disinterested service and sacrifice for the sake of Christian ideals was a motive scouted by the rulers and unthinkable by the masses. The vastness of China's territory and population, the antiquity of her traditions, her inveterate social habits, and her stolid contempt for western innovation, made the project of the first adventurers for the uplifting of China seem to the worldly-wise merely fantastic. The hope of the little band of Christian pioneers, that their efforts would one day raise the mighty mass of China to a higher level, that their teaching and practice would in the end leaven the inert lump of its pride and prejudice, was regarded even by many western Churches as a fond illusion.

The task set before these pioneers, inspired as they were by trust in God and compassion for men, was indeed harder and less promising than that of reconstructing European Christendom today. But in faith they faced it, and their faith has not been belied. This book shows, for our example and encouragement under stress of evil days, the huge difficulty of their undertaking, the spirit and method of their effort, and the measure and promise of their triumph.

Two points in the "method" I would lay stress upon. They are set out in the statement

of the original "Medical Missionary Society in China" by its first President, Thomas Richardson Colledge, M.D., Aberdeen. Among its aims were these :—

1. To encourage Western Medicine among the Chinese, and afford an opportunity for Christian philanthropy and service. . . .
2. To educate Chinese youths in Western Medicine.

First, then, western medicine was mediated to China by the Christian medical missionary. As an apostolic envoy, his Master's commission enjoined him "to preach the Reign of God and to cure the sick." His mission was twofold: a mission of healing, affording him "an opportunity of Christian philanthropy and service"; and a mission of teaching, whereby he proclaimed the true *motive* of such service to be that befitting a son of God and a follower of Christ. His faith and his works had to be of a piece; they had a common groundwork, and each reinforced the other.

It is of high importance that the blessings of medical and hygienic science shall continue to be associated in the mind of China with the Christian ideals of brotherhood and service. Corporate responsibility for the welfare of individuals, the duty of each to safeguard the public health of the community, are still novel conceptions in Chinese

life. It is necessary to real progress that they shall be assimilated and become operative.

Secondly, no medical mission is complete which does not provide for training Chinese practitioners as well as for treating Chinese patients. Scientific medicine in China must not continue indefinitely to be a "foreign doctrine." The medical profession of China must become national if it is to be universally accepted. To build up, on the best and surest foundations, a Chinese medical profession which shall be instructed in the soundest knowledge of the West and capable of advancing it, and which at the same time shall be imbued with the spirit and ethics of Christianity, has become the conscious aim of the foremost Christian Medical Schools of China. From small beginnings they have grown in some happy instances into great institutions. These vie with the best of other countries in the scope and standard of their instruction, and they are able, if at this juncture they receive fuller support and sympathy from Western Christendom, to render a unique service not only to China but to civilization. Barely half a century ago Japanese medicine was simply receptive of what the West could teach; it is now making valuable contributions of its own to the common stock. There is no doubt whatever that Chinese medicine, guided into the true path by the devotion of men like Professor Balme and his colleagues, will in

due course enrich the science of the world with new discoveries in China's own immense and unexplored fields. The time is therefore opportune for helping the Medical Colleges of China to fulfil their high mission of sowing the good seed; and, for earnest that the harvest will be plenteous on such a soil, the growth and development of the scantily-furnished medical missions here recorded should be more than enough. The labourers are still too few. But the promise of the future is theirs, and they have shown abundantly that they have in their hearts the courage and the faith that overcome. Let us strengthen their hands.

D. M.

AUTHOR'S PREFACE

The privilege of introducing the benefits of modern medicine to the Chinese people during the past century has been shared, for the most part, by the representatives of medical missions, and this book is a humble attempt to sketch some of the main lines of development which have been followed in connection with that enterprise. It does not claim to be a history of modern medicine in China, nor does it offer a comprehensive review of the various activities which have been connected with medical missionary work in different parts of the country. Limitations of space have made it impossible to do more than refer to some of the leading features which have characterized this effort; and as a result a large number of interesting facts have had to be omitted. Moreover, the difficulties under which the book has been written, owing to a temporary absence from China and to the constraints of an inexorable time-limit, have still further increased the possibility of serious omissions: a sincere apology is offered if such have occurred.

The book could not have been produced at all had it not been for the generous assistance afforded by the Secretaries of the various Mission Boards in Great Britain, Canada and the United

States, in placing their publications on this subject at the author's disposal. Special thanks are due to Mr C. H. Fahs, B.A., Librarian of the New York Missionary Research Library, for his indefatigable efforts in procuring sources of information; to Mr Lionel Colledge, F.R.C.S., for his kindness in supplying details of the life of his distinguished grandfather and in granting permission for the reproduction of Chinnery's famous painting; to Miss E. J. Haward, formerly Matron of the Peking Union Medical College Hospital, and Miss Batty, Secretary of the Nurses' Association of China, for their generous assistance in the preparation of material for the chapter on nursing; to Drs A. C. Hutcheson and J. L. Maxwell, Jr., for valuable information regarding the progress of medical research in China; to Rev. William Paton, Rev. Nelson Bitton, Dr R. Fletcher Moorshead and Dr H. Melville Churchill, for their helpful comments and suggestions; to the Women's Foreign Missionary Society of the Methodist Episcopal Church, U.S.A., and the Master of Emmanuel College, Cambridge, for permission to reproduce photographs; and, most of all, to Mr T. R. W. Lunt, late editor of the United Council for Missionary Education, for his invaluable literary criticism and inspiring counsel.

H. BALME

LONDON, *April* 1921

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When we glance backward at the history of medicine, those mighty in medical art and science, though long dead, are conjured up before us, and pass on as a panorama. A grave-looking Chinaman seems to take the lead; the shadowy form of some Egyptian priests, and some Grecian priests headed by Aesculapius, scarcely less shadowy, follow; then come the silent and deeply contemplative Pythagoras and his disciples; next come the Cnidians and the Asclepiades, with Hippocrates at their head. Socrates, Plato, and Aristotle bring up the rear of this group. Afterwards come the disciples of the Alexandrian schools, with those of Pergamus—Galen, Celsus, etc. Then follow the Arabians, with Rhazeres at their head, in the ninth century.

It is a strange and motley array; cowled priests, short-frocked bath-men and barbers, hooded women, gowned and bearded necromancers, with the symbols of Astrology and Christianity on their banners. The panorama moves on; light begins to dawn. Galileo, Bacon, Vesalius, Harvey, Sydenham, Hunter, and Jenner, with other names as familiar, appear on the scene; while, intermingled with these great and good men, come Rosicrucians and pretenders, Alchemists and Humoralists, Solidists and Chronothermalists, mesmerists, and fantastic dreamers of all sorts.

—James Henderson, M.D., F.R.C.S.E., 1864.

CHAPTER I

THE RATIONALE OF MEDICAL MISSIONS

That He might be the firstborn of a great brotherhood.
ROMANS viii. 29 (Moffatt's Version).

I

IT may not be possible to speak with exact precision as to what we would all imply by *Modern Medicine,* or as to the particular number of years during which western medicine, as practised to-day, can claim a modern origin, but there is one important criterion which will help us in drawing the dividing line. The distinguishing mark which characterizes modern medicine all over the world to-day is its fight for exact truth in the investigation and treatment of disease, and its employment of every known form of science in the attainment of that ideal.

It is easy for us to smile at the queer fantastic notions of the Chinese physician, with his strange ideas as to the causation of bodily disorders and his ingenious classification of diseases. But we are apt completely to forget the equally unscientific theories which filled our own medical text-books less than a century ago. Open any treatise on physiology of that time, or any work on the

etiology of disease, and you will find a medley of empirical observation and superstitious theory, with many an amusing reference to the various "humours" which affect the functions of the body.

But no sooner did physicians learn to yoke to the chariot-wheels of medicine the vital forces of natural science, with its insistent demand for the truth, than the old order began to pass away, and the era of modern medicine was ushered in. It was no longer of any avail to indulge in plausible theories as to the functions of the different organs of the body. The test-tube of the chemist and the experimental observation of the physiologist were henceforth to be sole arbiter and judge. It was idle to draw fancy pictures as to the supposed location of artery and nerve, of viscus and gland, for the keen scalpel of the dissector was laying each structure bare. It was futile to speculate as to the processes of disease, based upon an alleged interpretation of a patient's feelings and fancies, when the expert pathologist could unfold the whole story by autopsy and microscope, and ruthlessly expose every incorrect deduction.

What a tremendous change has been brought about! How wonderful is the new conception of the growth and development of the human body since first we summoned bio-chemistry and physical chemistry to our aid, and were taught

to understand something of the function of the endocrine glands. How complex and fascinating is the study of the processes of digestion and indigestion now that we have learned to appreciate the action of enzymes and vitamines. As for medicine and surgery, and the vast field of preventive medicine, all have been utterly revolutionized since bacteriology, serology, and radiology began to shed their wondrous light upon them, and to open up new vistas where formerly all was dim and uncertain.

It is a magnificent fight that has been going on —this fight for exact scientific truth—and though there still are innumerable regions to be explored and conquered it may confidently be asserted that the struggle for this great ideal has now been won, and that no one to-day can claim to be an exponent of modern medicine who has not inscribed this emblem of Truth upon his banner.

There is a second great ideal which, while not perhaps entirely confined to modern times, may also be claimed as one of the greatest contributions which western medicine has had to offer to the world. This is the conception of trusteeship, in relation both to medical knowledge and to the care of the sick.

The doctrine of mandates, as at present understood, is a direct product of those newer ideas of international responsibility which have found

their expression in the League of Nations. But the application of this doctrine had a much earlier origin in respect to individuals. It sprang into being on the first occasion that a physician taught that all medical discovery, and all knowledge as to the causation and treatment of disease, were the common heritage of every practitioner of medicine, and not the private monopoly of the discoverer himself. And when one begins to consider the implications of that teaching—particularly against the background of those countries where no such doctrine has ever been taught — the immense potentiality of such a truly Christian conception at once seizes the imagination.

Think for a moment where medicine would be to-day if Jenner had set up a private consulting room for the practice of vaccination, and had never made it possible for others to share in his discovery. Think of the appalling and unnecessary suffering that hundreds of thousands would have endured if Morton and Simpson had appropriated to themselves the sole right to the administration of anæsthetics, the secret of which might well have died with them. Where would surgery be if Joseph Lister had not made his antiseptic principles freely accessible to one and all ? Where, indeed, could we point to any triumphs of modern medicine, had it not been for the fact that this conception of trusteeship

has been the dominating ideal of every medical investigator of modern times ?

Nor was it only in the realm of medical discovery that this new ideal became operative. In spite of certain regrettable exceptions, the sense of trusteeship has gradually become the fundamental conception governing the attitude of physician and nurse towards their patient, with the result that everything connected with the sick man—his health, his life, his very confidence —is regarded as a sacred trust, for which his doctor is answerable to God and to his fellows. It is around this central thought that the whole of our modern system of medical and nursing ethics has been built up. Hospitals and dispensaries, Red Cross Societies and asylums, have all alike been organized as an embodiment of this creed. And the faithful work of every conscientious physician and nurse has been an exposition of this underlying sense of personal responsibility for the patient's welfare.

II

It is as one comes to study the civilization and progress of other lands, and to appreciate the appalling loss, both to health and to general knowledge, which the absence of these two dominating ideals means, that one first learns to estimate them at their true worth. No close observer of Chinese life and thought can fail to be astonished

that a country of such magnificent history and such ancient civilization, and a people with such reverence for scholarship, should be left so far behind by the nations of the West in all matters of science. It is startling to realize that a nation whose schools and colleges have been in existence almost from time immemorial should have failed until very recent years to organize any system of scientific medical education; that a land where benevolence has been held up as a primary virtue should be devoid of hospitals; and that a people who have set so great a store upon knowledge should have regarded the physician as in very much the same category as the astrologer and the fortune-teller.

Yet that was exactly the condition up to a very few years ago. In China there was no medical profession, as we understand the term; there were no restrictive regulations to safeguard the practice of medicine, and no authority which could prevent any illiterate adventurer who wished to do so from hanging out a doctor's sign, and preying upon the credulity of the public.[1]

How may this be accounted for? May it not

[1] "The profession of medicine is considered an excellent conduit, or waste pipe, to carry off all the literary bachelors who cannot attain to the superior grades, or pretend to the mandarinate; and China is consequently swarming with doctors, even without counting the almost innumerable amateurs, for . . . almost every Chinese has a smattering of medical knowledge, and the smallest village boasts several professional practitioners."—M. L'Abbé Huc, *Christianity in China, Tartary and Thibet*, vol. iii. p. 209.

all be explained by the lack of those two great ideals, which, as we have seen, have done so much to build up the tradition of medicine in western countries? Centuries ago, when a shrewd observation of human nature and an empirical knowledge of the use of drugs formed practically the only stock-in-trade of the physician in any part of the world, China was not far behind any other country in medical knowledge—in fact, in some respects she was actually leading the way. Two thousand years before the birth of Christ the Chinese medical teachers were accurately describing the symptoms of cholera. Seven hundred years before the value of inoculation against smallpox was recognized in this country it was freely practised in China. The uses of mercury, of arsenic, of rhubarb, and of numberless other medicaments, have been known for centuries among the Chinese. And even such essentially "modern" ideas as the importance of clean, airy, and well-lighted rooms, and the value of quietness, are referred to by Lew-lan in the regulations which he drew up for the treatment of smallpox nearly two hundred years ago, and which were published in the *Golden Mirror of Medical Practice.*

But in spite of this promising beginning, the application of natural science to medicine never reached China, and even so fundamental a physiological fact as the circulation of the blood was not even guessed at by a Chinese practitioner.

The superstitious ideas regarding the dead body made the practice of dissection an impossibility. These things, together with complete ignorance as to the use of the microscope or the principles of chemistry and physics, necessarily resulted in the most erroneous ideas becoming current as to what took place within the human organism; whilst the absence of any system of examinations, or other qualifications for medical practice, made the widespread exploitation of the profession not only possible but inevitable. Perhaps it was due to this fact that in the Chou dynasty, 1249–1122 B.C., the public were warned against swallowing the medicine of any physician whose family had not been in practice for at least three generations; whilst at the same time it was decreed that all medicine administered to a ruler of the state must first be tasted by the Prime Minister.[1] A new use for that influential statesman, and possibly a novel means of removing him from office!

Such conditions made the formation of a real medical profession an utter impossibility, with the result that any knowledge accumulated in course of years by a practitioner of experience was handed down from father to son as a jealously guarded secret, and never passed into general currency.

There is no doubt whatever that many of those old Chinese physicians, by dint of careful observa-

[1] *Historic China*, by H. A. Giles, p. 10.

tion, gathered together in course of time a mass of valuable information as to the symptoms of various diseases, and the action of the chief drugs in the pharmacopœia. Their knowledge may have been empirical, and difficult of explanation in terms of modern science, but much of it would undoubtedly be accurate, and of great benefit to the patient. Unfortunately most of this information has been lost to the world, for the reasons above stated, and such secrets as still remain are exceedingly difficult of discovery.

Often, too, the Chinese physician compensated for his ignorance of exact science by a ruminating philosophy and a profound study of human nature. An amusing instance of this left me with a very deep admiration for the manner in which the experienced Chinese practitioner understands and handles his patients.

It happened, in my early days in China, that I had as a patient a member of the bodyguard of one of the provincial governors. He was a magnificent specimen of physical strength, a man who, when carrying important despatches to and from Peking, would think nothing of riding sixty or eighty miles a day on the relay of ponies provided for him. He was a member of the Christian Church, and a man who was looked up to by all who knew him. But, alas, he became a victim to cancer of the stomach, and by the time he consulted me about his symptoms all hope of effecting

a cure had gone. A hard tumour had formed which was firmly fixed, and already giving signs of secondary growths, whilst the poor man could barely retain any kind of nourishment. He would not consent to any operation which did not promise to eradicate the whole disease, and one was helpless to do anything beyond attempting to alleviate his symptoms.

He was usually extremely bright, but on one occasion, on visiting him, I found him looking thoroughly depressed and worried, and enquired as to the cause. He glanced round the room anxiously, to make sure that we were alone, and then, with an expressive jerk of his finger towards the next apartment, gave me to understand that there were domestic troubles afoot. His wife was a little bit of a thing, but the sharpness of her tongue was proverbial! She had never had any sympathy with her husband's attitude towards Christianity, and had thoroughly disapproved of his consulting a foreign doctor about his complaint; and the trouble on this occasion had arisen from her insistence that he should call in a Chinese physician.

On ascertaining the state of the case, I urged him to do as his wife suggested, and stated that I would be only too glad to meet such a physician in consultation. The matter was accordingly arranged, and a few days later the doctor was summoned.

He was an elderly gentleman, with large horn-rimmed spectacles and a most impressive manner, and on alighting from the cart which had been sent for his conveyance he walked slowly and sedately up the path to the house. On being admitted, he proceeded leisurely to a chair, and spent the next half hour in full and earnest conversation with the lady of the house, whom he doubtless recognized as a person of some importance. He then entered the patient's room, asked him a few questions as to his symptoms, and proceeded, with utmost gravity, to feel the patient's pulse. First the right wrist was taken up and thoroughly studied and then the left, after which, without further examination of physical signs, he retired from the bedroom and commenced to expound the case to the wife and myself. How far this was done to impress the lady, and how far in deference to my ignorance of Chinese medicine, I am not in a position to say, but I rather imagine it was the latter. So far as I can recollect the incident after the lapse of some years, he proceeded somewhat as follows :—

"This case is a perfectly simple one, and presents no real difficulties at all." (This to the wife, who looked immensely relieved. Then, turning to me, he continued :) "In our understanding of the human body, the state which we call health is dependent upon an exact balance being maintained between the two elements of

the dual principle, the Yin and the Yang.[1] When we inspire, we take in the good air; that is the Yang element. When we expire, we breathe out the bad air, the Yin. When we need nourishment, our body takes in the good food—the Yang—which sustains and nurtures it; whilst the noxious elements, the Yin, are excreted.

"Now this patient looks to me as though he had done a great deal of horse-riding" (this with an enquiring glance at the wife, who beamed her approval of such insight and intelligence), "and I fear that in the course of his travels he has been subjected to a severe strain, which has caused an internal twist. The result is that the Yang and Yin elements have been reversed, so that now the good food that he takes, instead of passing into the body, is immediately rejected as soon as swallowed"!

Who could wish for a clearer explanation than that? How far more convincing than all that stupid talk about a carcinoma of the pylorus, and reversed peristalsis! The lady's face was a study in vindicated prophecy!

I would have done well to leave the matter there, but unfortunately, in my ignorance, I

[1] The powers of the Yin and the Yang are popularly supposed in China to underlie the creative principles of the universe, and by their interaction to have produced and to control the forces operating in nature. Chinese metaphysics of the last thousand years have been based upon the supposedly universal operation of the Yin and the Yang. Geomancy and spiritism, as well as medicine and chemistry, have had this belief at their foundation.

innocently enquired as to whether, in the great Chinese pharmacopœia, there did not exist some drug which would undo the "twist" and enable the Yang and Yin to resume harmonious relations.

The reply was immediate and crushing. "Oh certainly; we have such drugs, and that is just what I shall prescribe. But as this patient has already taken a great deal of foreign medicine, I greatly fear that the efficacy of the remedy may be impaired and interfered with in this particular case"!

That evidently was so, for the poor patient died within ten days of taking the first dose of the medicine (mainly opium) which was sent him. But I greatly fear that the widow ascribed his death to the unfortunate circumstances which prevented her from calling in that Chinese physician earlier! Certainly he had left me with the reflection that he was a very shrewd student of human nature, and that modern medicine had little or nothing to teach him as to the best means for impressing one's patients and inspiring confidence!

III

But if the scientific ideal has been lacking amongst Chinese practitioners, the conception of trusteeship has been even more conspicuous by its absence. Owing in part to the failure to develop any real "guild"-spirit amongst Chinese

physicians, and owing even more to the attitude which the educated classes of China have adopted towards a "profession" which unfortunately included so many quacks and illiterate charlatans within its ranks, the Chinese doctor, except in rare instances,[1] never becomes a family physician. He attends a case when summoned to do so; he feels the patient's pulse; he tenders his advice; and he writes out his prescription. But there the matter ends, and he never visits the house again unless perchance the family summon him to do so. He recognizes no responsibility to see the patient through his illness; and he knows quite well that unless his prescription has given immediate relief a second and perhaps third physician will be called in after him, almost as soon as his medicine has been sampled.

In exactly the same way this lack of any conception of trusteeship—and, may we not add, the lack of the impelling constraint of Christian service—led to a complete failure to develop any system of hospitals, or of other institutions for the reception and care of the sick. It was nobody's responsibility to do such a thing, nor was it anybody's responsibility to institute measures for the prevention of disease or for the health of the community.

[1] These exceptions are chiefly the cases of notable families, usually belonging to the official class, who retain the services of a medical practitioner. Such an appointment may become hereditary, being handed on from father to son.

In times of serious epidemics the Chinese have often improvised special expedients, in the face of an immediate and pressing danger, but this has been merely of a temporary nature, and inspired by motives of self-protection. There has been no systematic attempt to organize works of public beneficence, because China has lacked a religious dynamic of sufficient vitality and positiveness to give to her public and social life a sense of corporate responsibility.

This state of things resulted in the widespread suffering and disease of which writers on China have constantly spoken—suffering and disease which are all the more pathetic because of the numerous instances in which they are due to entirely preventable causes. There is no sadder sight in China to-day than the collection of suffering humanity which gathers at every hospital clinic, and which always includes a number of patients who might easily have been cured had they been able to secure proper attention in time, but upon whom those terrible words " Too late " have now to be pronounced.

Here, for example, is a group of children, totally blind, who have lost their sight during an attack of measles or smallpox, simply because there was no one at hand with the requisite knowledge and skill or the requisite sense of responsibility to bathe their poor inflamed eyes. Here is a fine young man with an utterly useless limb—

useless from no more serious cause than an ordinary dislocated joint, which all the pullings and twistings of the Chinese " bone-setter " have failed to reduce. Here are inoperable tumours that might easily have been removed—and with every hope of success—if the patient had only been in a position to receive skilled help last year or the year before. And here is a strong, healthy-looking workman whose axe slipped one day last week whilst he was at work in the fields and inflicted a deep cut on his ankle ; but, alas, his friends used the common soil in their well-meant efforts to stop the bleeding, and now he is in the iron grip of tetanus.

So it passes on—this ceaseless procession of sufferers—until at last the physician feels perfectly desperate to do something which will stop this awful wastage of life and usefulness, and bring health and comfort in place of needless pain and disease.

IV

It was from sentiments such as these that the work of medical missions had its birth in China ; but, as we shall see in the following chapter, the men who laid the foundation of the enterprise were men who longed not only to stem this tide of human sorrow, and to offer to the Chinese those great ideals of truth and trusteeship which Chinese medicine had failed to contribute, but also to use the art of healing as a handmaid of

that higher religious truth which China so sorely needed. They realized that they were in contact with a country where pitiable superstition held sway, where fear of evil spirits lay at the root of much of the hostility to western science and progress, where the social conscience rarely passed beyond the limit of family and clan and was insensible of civic and national obligations; and where the moral beauty of the Confucian ethic was not commuted into the "pure religion" of self-sacrificing service. These great pioneers of modern medicine in China desired above all else that they might be able to make a worthy contribution to the physical needs of the Chinese, whilst at the same time pointing them to the Fountain of all true life and the Inspiration of true brotherhood.

This purpose has never perhaps been expressed in choicer language than that which was used by those founders themselves, in their first published paper, when they wrote :—

> Although medical truth cannot restore the sick and afflicted to the favour of God; yet, perchance, the spirit of enquiry about it, once awakened, will not sleep till it enquires after the Source of truth; and he who comes with the blessings of health may prove an angel of mercy to point to the Lamb of God.
>
> At any rate, this seems the only open door; let us enter it; loathsome disease in every hopeless form has uttered her cry for relief from every corner of the land; we have heard it, and would and must essay its healing. A faith that worketh not may wait for other doors. None can deny that

this is a way of charity that worketh no ill, and our duty to walk in it seems plain and imperative.[1]

Such men as these could never be content merely to relieve the external conditions which they saw around them. Nothing would suffice but to bring the whole message of God's love and compassion, as Jesus taught it, to bear upon this barren situation. With this before them they deliberately set about the twofold task, to alleviate suffering and wretchedness wherever it was found, and thereby to prepare a way for the whole gospel of God's goodness. In doing so they quickly proved, not only that they were blazing a trail for the preacher, but that their ministry of healing was itself an exposition of the Christian message which even the dullest or most hostile could understand.

Every missionary doctor and nurse goes to this work with the primary purpose of bringing the blessings of the Gospel to those who have never before heard of the coming of Jesus Christ. They would not call themselves missionaries if it were not for this. Similarly, everything that is done in the mission hospital or Christian medical college is done with the single object of representing and interpreting the Christian message to those who have never understood it. But so far from the work of healing being regarded as a

[1] *Original suggestions for the formation of a Medical Missionary Society in China.* 1836.

mere means to an end—to be laid aside, presumably, as soon as that end is attained—every missionary doctor and nurse regards his profession as an integral and essential part of the presentation of Christianity itself. They believe that in this they are following the example of the Great Physician, who can never be accused of using His gifts of healing as an advertisement for His message.

"The Master's philanthropy," as the late Dr S. R. Hodge wrote thirty years ago, "went hand in hand with His preaching of the Kingdom, and for Him there was but one philanthropy—a love to the complete man, body, soul and spirit. There never was by Him, and there never can be by us, a splitting up of the Church's mission into evangelistic and philanthropic. The gospel is good news to the whole man, and when John sent to enquire whether Jesus was 'He that should come,' he was pointed to the twofold witness of healing and preaching." [1]

The same idea was succinctly expressed by the China Centenary Conference at Shanghai in 1907 in the following words :—

> Medical missions are not merely an adjunct, but an integral and co-ordinate part of the missionary work of the Christian Church.[2]

The aim of medical missions may therefore be

[1] *China Medical Journal*, September 1891.
[2] *Resolutions of Centenary Conference*, Shanghai, 1907.

stated as being nothing less than an attempt to offer, in the Name and for the sake of Jesus Christ, all those blessings to body and soul which have come to us through His Example, His Life and His Death. As He gave perfect healing and restoration to health and activity, so the medical missionary of to-day seeks to carry with him the very best that modern medical science has to offer, in the careful investigation and treatment of all manner of disease. As He manifested a new spirit, of gentleness, of concern, of willingness to touch the most loathsome, so the medical man who calls himself by His Name seeks to act as He did, and so to represent Him. As He trained His followers in service, so the missionary doctor and nurse regard as one of their chief tasks the training of their Christian helpers in a like conception of disinterested service and self-sacrifice. And, just as He taught that the greatest need of man was not physical but spiritual—the restoration of a fellowship with God which sin had broken—so the medical missionary conceives it to be his greatest privilege and duty to lead men into that fellowship with God which Christ has made possible for all.

It is in the quest of this objective that medical missions have been the pioneers of modern medicine in every part of China. It is this aim which has led to the establishment of medical colleges and nurses' training schools, to the under-

taking of scientific investigation and the translation of medical text-books, to the initiating of public health reforms and the education of public opinion in the prevention of disease; as well as to those other activities of which subsequent chapters will treat.

The new conception of communal service and responsibility, so notable a feature of student life in China to-day, and bursting with hope for the future of the East, has its roots in little mission schools and hospitals all over China, where the young people of that ancient nation are learning at last the true meaning and obligation of brotherhood and the significance and the joy of unselfish service.

CHAPTER II

THE COMING OF THE WESTERN PHYSICIAN

The world is a whole: and as the human race approximates to the perfection which it is destined to reach, the principle of union and fellow-feeling will become more and more influential. A Bacon, a Newton or a Franklin is not to be monopolized. Such men belong not merely to the nation that gave them birth, but to the whole world. . . . Upon those who first enjoyed the boon rests the obligation to extend universally their principles, which have revolutionized the philosophy and science of Europe, and which, whenever permitted free ingress, will produce similar results in China. . . . If the principle is admitted that our race is one, then the remoteness of the empire for which we plead cannot neutralize the obligation.—COLLEDGE, PARKER AND BRIDGMAN, *April 14th*, 1838.

IN the days, nearly a century ago, when the trading adventurers of all Europe were contending for the markets of the Far East, and competing to develop the limitless resources of "East India" and China, an old Rugby schoolboy was pushing his way along the streets of a busy Chinese seaport. He had studied medicine after leaving school at Leicester Infirmary and St Thomas's Hospital, and it was a strange accident that had first taken him out to the Far East. A doctor had failed to report for duty on the ship to which he was attached, and in the emergency Sir Astley Cooper, the famous surgeon, had confidently

recommended this favourite student, Thomas Richardson Colledge, for the post. A few years later he had joined the Honourable East India Company, whose trading operations extended to China. Now he was attached to their trading station at the port of Macao and in contact with the seething masses of Asiatic humanity which crowded the busy streets.

It was an extraordinary sight that met Colledge's eyes. But it was not the strangeness of the Chinese dress, nor their unfamiliar language, which most of all impressed him; it was the appalling spectacle of suffering which confronted him on every side. Every kind of painful disease seemed to be represented, and what affected him most of all was the pathetic helplessness of the blind—the old man tapping his way along with his stick, the procession of beggars guiding one another's footsteps, the children clinging to the shadows to avoid the painful glare of the strong eastern sun. Such sights stirred his very soul, and though there was but little he could do, he resolved there and then to devote as much of his time and money as he could to the relief of these sufferers. With characteristic energy he proceeded at once to make enquiries as to the possibility of opening a hospital in the port, and before long—in the year 1827—he had succeeded in founding the first institution ever opened in China for the purpose of bringing the benefits of

western medicine to the suffering Chinese—the Macao Ophthalmic Hospital.[1]

The hospital thus established was the forerunner of the great adventure of medical missions, which represents the most beneficent gift which the white man has ever had to offer to the most ancient civilized nation of the world.

No wonder that fifty-two years later, looking back over a long life of useful service, Thomas Colledge said of the hospital—or, more particularly, of the Medical Missionary Society which followed it ten years later: "That was the one good thing of my life." And Dr Joseph Thomson, the careful American historian of medical work in China, regarded Colledge as the originator of medical missions in that country.[2]

In 1828, the "British Factory" being stationed in Canton, Dr Colledge opened a dispensary in that city also. A visitor thus describes the scene:—

At an early hour in the morning one may daily witness the sick, the blind, and the lame, of all ages and both sexes, crowding around the doors of the dispensary. We have seen helpless children brought there in the arms of their nurses, or more commonly, according to the custom of the country, lashed upon the back of a young servant. We have seen old, blind, decrepit

[1] This was not, however, quite the first introduction of western medicine to China. In the year 1805, Dr Alexander Pearson, surgeon to the East India Company, had introduced the practice of vaccination, whilst in 1820, Robert Morrison and Dr Livingston, also of the East India Company, had started a dispensary in Canton for the Chinese poor, conducted for the most part, however, by Chinese practitioners and with Chinese drugs.

[2] *China Medical Journal*, 1888, p. 41.

men, with staff in hand, led thither by their little grandchildren, while others, who were in better circumstances, were brought in their sedans. The number of those who have come for aid has been very great, and the cures not a few.[1]

I

Colledge was not a medical missionary in the ordinary sense of the term, but he was a man of great devotion and piety, eager to employ his talents in the service of humanity and in the extension of the Kingdom of God. Thus it was that when, in the October of 1834, there landed in Canton the first medical missionary ever appointed as such by a Mission Board—Peter Parker, of the American Board of Commissioners for Foreign Missions—Colledge extended to him the warmest welcome, and the two men became fast friends. They formed a remarkable combination, and their friendship was a happy augury of the co-operation of Briton and American, of civil servant and missionary, which the future development of the medical missionary enterprise in China was to manifest.

Peter Parker was a Yale graduate and a man of striking ability and inexhaustible energy.[2] Within a year of his arrival in China he opened,

[1] *Chinese Repository*, vol. ii., p. 276.

[2] The biography of Peter Parker—who in later years played a very notable part in the relations of U.S.A. and China—will well repay study. It is written by the Rev. Geo. B. Stevens, D.D., and published by the Congregational Sunday School and Publishing Society, Boston, U.S.A.

on November 4th 1835, the first Medical Missionary Hospital of the Far East—the Ophthalmic Hospital, Canton, afterwards known as the Canton Hospital. His success was immediate and sweeping. He himself thus describes these days :—

> It was after a long effort that a place was found for a hospital, and when at length a suitable building was rented and previous notice had been given, on the first day no patients ventured to come, on the second day a solitary female afflicted with glaucoma, on the third day half a dozen, and soon they came in crowds. It is difficult to convey to a person who has not visited the hospital a just idea of them. He needs to be present on a day for receiving new patients, and behold respectable women and children assembling at the doors the previous evening, and sitting all night in the street that they might be in time to obtain an early ticket for admission. He need behold in the morning the long line of sedans, extending far in every direction ; see the officers, with their attendants ; observe the dense mass in the room below ; stand by during the examination, and giving out of tickets of admission, urgent cases being admitted at once, while others are directed to come again at a specified time. Numbers from other provinces, from Nanking and Peking, who were resident at Canton, have called.[1]

But Colledge and Parker both saw from the very first that if this enterprise of medical missions, so happily inaugurated, was to be placed upon a permanent and satisfactory foundation, and possess a definite and clear policy, it must be related to a proper organization. They accordingly proceeded to draw up plans for the foundation of a Medical Missionary Society, and to issue

[1] *The Medical Missionary in China*, by W. Lockhart, p. 122.

"suggestions" with regard to the same. This great document is now unfortunately out of print, but the following extracts may be quoted in addition to those already given in Chapter I[1]:

Viewing with peculiar interest the good effects that seem likely to be produced by medical practice among the Chinese, especially as tending *to bring about a more social and friendly intercourse* between them and foreigners as well as *to diffuse the arts and sciences* of Europe and America, and in the end *to introduce the Gospel of our Saviour in place of the pitiable superstitions* by which their minds are now governed, we have resolved to attempt the formation of a society to be called the Medical Missionary Society in China. . . .

All truth is of God: the introduction of medical truth into China would be the demolition of much error. As a means, then, *to waken the dormant mind of China*, may we not place a high value upon medical truth, and seek its introduction with a good hope of its becoming the handmaid of religious truth. . . .

That enquiry after medical truth may be provoked, there is good reason to expect; for exclusive as China is in all her systems, she cannot exclude disease, nor shut her people up from the desire of relief.

These suggestions were published in 1836, but it was not until February 21st 1838 that a public meeting was held in Canton at which the Society was definitely brought into being.[2]

The first statement published by the newly formed "Medical Missionary Society in China" in April 1838, embodying the original suggestions, bears eloquent testimony to the statesmanlike

[1] *Vide* p. 31.

[2] The first officers were: Colledge, *President*; Parker, Bridgman, W. Jardine (of Jardine, Mathieson & Co.), and G. T. Lay, *Vice-Presidents*.

character of the founders and their broad outlook upon the task of medical missions. We do well to study the splendid conception which these men held as to the aim and content of the medical missionary enterprise, which is shown by the emphasis they laid on the following points in their first manifesto :—

1. To encourage western medicine amongst the Chinese, and afford an opportunity for Christian philanthropy and service.
2. To extend to the Chinese people some of those benefits which " science, patient investigation, and the ever-kindling light of discovery, have conferred upon the West."
3. To cultivate confidence and friendship, and thus introduce the Gospel of Christ in place of heathenism.
4. To provoke enquiry into truth by the opposing of exact science to superstitious ignorance.
5. To make a contribution towards the relief of human suffering, and the cure of loathsome diseases.
6. To educate Chinese youths in western medicine.
7. To advance general medical knowledge by the reflex benefits which will accrue from scientific discoveries in China.

Parker's immediate success established his

reputation, and patients of all classes entrusted themselves in his hands. Within two months of the opening of the Canton Hospital—in pre-anæsthetic days, let us remember—he is removing a huge and dangerous tumour weighing a pound and a quarter from the temple and face of a Chinese girl of thirteen, the child bearing the operation with wonderful patience and fortitude, and the wound healing by first intention. A year later he is performing the first amputation ever attempted on a Chinese patient (a disarticulation through the shoulder-joint for osteosarcoma of the humerus, which he performed in exactly one minute, and from which the patient recovered and was walking about in six days!). In 1838 he is successfully operating upon a large scirrhous cancer, whilst from another patient he removes an extraordinary growth which grew from beneath the chin and had to be supported in her lap—an operation which won for him the undying gratitude of the relatives, who presented him with a most eulogistic tablet.[1]

In 1844 Parker is doing his first lithotomy operation, and for the first time on record is able to give complete and permanent relief to one of those many sufferers from calculus who are found

[1] On visiting England in 1841 Parker brought with him a most interesting set of paintings of some of the surgical cases which he had successfully treated in Canton, given to him by a Chinese artist. These he presented to Guy's Hospital, where they may still be seen in the Gordon Museum.

in such great numbers in the Canton area. In 1847 he is rejoicing in being able to introduce the blessings of anæsthesia to the Chinese, and within a few months has gained such a reputation for the newly discovered anæsthetic that Chinese with nothing the matter with them are asking to be put under ether just to see what it is like !

The gratitude and confidence of all classes, from the Imperial Commissioner down to the humblest coolie, were extended to Parker on every side, and nothing perhaps bore more picturesque testimony to the affection with which he was regarded by his patients than the pathetic appeal of one old Chinese gentleman whose sight Parker had been successful in restoring. He begged to be allowed to send a native artist to paint Parker's portrait in order that he might be able to bow before it every morning. It is no wonder that Beadle said of him: "Dr Parker opened the gates of China with a lancet when European cannon could not heave a single bar."

During 1840 and 1841 Parker had a most successful tour through the United States and Great Britain, preaching before Congress at Washington, addressing large and enthusiastic meetings in London, Edinburgh, Glasgow, and Liverpool, and receiving strong support for the newly formed Medical Missionary Society from such prominent leaders as the Duke of Wellington, Sir Robert Peel, the Lord Provost of Edinburgh,

and the Archbishop of Canterbury. It was as a result of this visit that the Edinburgh Medical Missionary Society was first founded (though under a different name at that time) on November 30th, 1841, with the celebrated Dr Abercrombie as its first president.

II

Meanwhile other medical men had been arriving in China to take up missionary work, the most conspicuous being William Lockhart, F.R.C.S. in 1838, and Benjamin Hobson, M.B. in 1839, the former a graduate of Guy's Hospital and the latter of University College, London, and both of them members of the London Missionary Society. Like Colledge and Parker before them, they were exceptional men. William Lockhart was a born pioneer. After working for a short time in Macao and Hongkong he proceeded farther north, and in 1844 he opened the first hospital in Shanghai and laid the foundations of one of the most successful medical missions in China. The Tai Ping Rebellion found him still at his post, and there he remained throughout the siege and capture of the city in 1853–4,[1] rendering conspicuous service to the hundreds of wounded for whom no sort of medical provision had been made.

[1] It was the *Triads*, a section of the Revolutionaries, who actually captured Shanghai.

He left Shanghai in 1857 and returned to England. But four years later, on the ratification of the Treaty of Tientsin which opened up Peking for foreign residence, the old pioneering instinct again asserted itself, and he immediately returned to China and opened the first mission hospital in the national capital.

The great contribution of Benjamin Hobson lay in rather a different sphere from that of Lockhart. He, too, did most successful medical work, first in Hongkong and subsequently in the new hospital which he opened in the western suburbs of Canton (Kum-li-fow), and in Shanghai. But he soon recognized that the great problem of China's suffering could never be properly solved until some systematic attempt was made to train up a new and enlightened medical profession in the country by giving them, in their own tongue, the benefits of a modern medical literature. His own words best describe this effort. Writing on this subject in 1858, he says :—

> It seemed very desirable to attempt to introduce the well-established principles and facts of western medical science, to prepare the way for changes in the present system of China. Under this conviction a work was prepared in Canton eight years ago on the subject of anatomy and physiology, avoiding all theoretical opinions. This has been extensively read and very favourably received, and has proved a good foundation for what was to follow.
>
> The next treatise was on the properties of air, light, heat, and electricity, and the elements of astronomy and natural history, designed as an introduction to these varied branches

of natural phenomena. This has been succeeded by a work on the principles and practice of surgery; by another on midwifery and the diseases of children; and by a fifth on the practice of medicine and materia medica, together with a medical vocabulary in English and Chinese, to explain and fix the terms used. The illustrations show at once the subjects treated of, and I have spared no pains, by the aid of an intelligent assistant, to make these works accurate, perspicuous, and useful.

Although attended with difficulties, it is still quite practicable to make every subject with which we are ourselves acquainted as clear and expressive in Chinese as in English. Both religious and scientific works should, however, only be made by persons who have been some time in the country, and conversant with Chinese authors. The great desideratum for a translator is a good and fixed nomenclature on every branch of science. The language admits of a satisfactory and distinct explanation of most new terms; where it does not, these must be transferred.[1]

The magnitude of Hobson's task becomes the more apparent when it is remembered that in 1850 when he produced his first book there was no scientific background amongst the Chinese medical practitioners of that day, nor was there any scientific nomenclature in Chinese, such as he speaks of as the great desideratum of every translator. In many instances he had first to create and explain the very terms that he needed to use. But so successful was he in carrying out this work that his books were actually republished by the Viceroy of Canton, who had the illustrations recut, printed separately, and made up into rolls, in Chinese fashion. Each volume, as it came out,

[1] *The Medical Missionary in China*, by W. Lockhart, p. 155.

was republished in this way, Government officers, physicians, and people of every rank reading them, whilst the foreign merchants of Shanghai contributed the sum of $2,000 towards the preparation of a larger edition.

The years that followed saw a steady extension of medical work to other centres, led by a succession of men as remarkable, in many instances, as the first four pioneers already referred to.

Commencing, as we have seen, with MACAO, CANTON and HONGKONG, the movement soon spread northward and by 1842 had reached the important seaport of AMOY. Here Dr W. H. Cumming, a self-supporting American physician, led the van, to be followed a few months later by Dr J. G. Hepburn of the American Presbyterian Mission—the most versatile figure, perhaps, who has yet been seen in the Far East. Compelled to leave China on grounds of health after two years' work in Amoy, Dr Hepburn practised successfully as a physician in New York for thirteen years; then, again hearing the call to the Orient, he turned his back on the promising career that had opened to him and sailed for Japan, where, in the next thirty-three years, he became known throughout the whole country as pioneer medical missionary, compiler of the first great Anglo-Japanese dictionary, Bible translator and educationalist, winning distinctions and honours from the Japanese Emperor,

from his Alma Mater (Princeton), and from many other sources.[1]

At Ningpo, where medical work was opened in 1843, another great American physician who afterwards rendered signal service in Japan, Dr D. B. McCartee, was the pioneer, together with Dr D. J. Macgowan of the American (Northern) Baptist Mission. Dr McCartee's services to the Far East were almost as varied as those of Dr Hepburn. An expert linguist in both Chinese and Japanese (he spent no less than twenty-eight years in each country), a scientist of no mean attainment, a profound student of international law and a successful diplomatist, he served in turn as medical missionary, as consul, as Professor of Natural Science and Law in the Kasei-Gakko, Tokyo (forerunner of the Tokyo Imperial University), and as Foreign Adviser to the first Chinese Legation in Japan, and was largely instrumental in the establishment and maintenance of good relations between the Chinese and Japanese people.

The first hospital at Ningpo consisted of three rooms in an old Taoist temple, but afterwards a new building was erected by Dr Macgowan, towards the furnishing of which the foreign community of Bengal contributed a large sum of money. An interesting feature of the work

[1] See *Hepburn of Japan*, by William Elliot Griffis, D.D., Westminster Press, Philadelphia, 1913.

at Ningpo was the special course of lectures to Chinese practitioners of the city which Dr Macgowan used to give from time to time, aided by plates, models, and a skeleton. He also published a monthly scientific magazine in which he attempted to relate the work of the hospital to the life of the city.

From Ningpo the new enterprise soon reached Shanghai. There, as we have already seen, it fell to William Lockhart, in 1844, to make the first advance, followed a few years later by Dr Charles Taylor of the American (Southern) Methodist Mission, and by Bishop Boone, M.D., and his son Dr H. W. Boone, founders of the important medical work connected with the American Protestant Episcopal Church.

So the work spread, British and American physicians vying with one another in friendly rivalry, leading the pioneer movement in new centres. Down in Foochow it was a representative of the Church Missionary Society, Dr W. Welton, who was first in the field, in 1850, and the old temple which he secured as his first dispensary, in the teeth of fierce opposition, quickly became the resort of crowds of patients, and in the end opened the way for the remarkable developments of all branches of missionary work in that neighbourhood in later years. Similar foundations of a great future were surely laid in Swatow and Formosa, in 1863 and

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1865, by two well-known pioneers of the English Presbyterian Mission, Dr William Gauld and Dr James Maxwell—men who subsequently made noteworthy contributions to the cause of medical missions in Great Britain.

During this period medical work was also spreading to the most northerly provinces of the Empire, commencing in PEKING under William Lockhart in 1861.[1] From a humble beginning in some buildings belonging to the British Legation, with only two or three patients a day, he was able in two years' time to report a total attendance of over 10,000 separate cases before he handed on the work to Dr John Dudgeon.

It was that same American physician, Dr McCartee, whose varied career has been briefly sketched above, who first brought the benefits of modern medicine to the people of the sacred province of SHANTUNG, whilst a young Irishman, Dr Joseph M. Hunter, blazed the trail in MANCHURIA. Hunter had been deeply moved by the last appeal of that great Scotsman, William Chalmers Burns, uttered as he lay dying in his lonely inn at Newchwang. It was this appeal

[1] It is interesting to remember that this was not the first time that western medicine was practised in Peking. In 1692 the emperor Kang-Hsi, during a severe attack of fever, was induced by the Jesuit missionaries to take quinine, which they were employing with success for similar cases in the city. This proved efficacious, and in gratitude for the cure the emperor gave them a house within the precincts of the palace.

which led to the commencement of the work of the Irish Presbyterian mission in Manchuria, and thus paved the way for the great medical service rendered there during the last thirty or forty years by members of that mission and of the United Free Church of Scotland, with which all readers of Dr Dugald Christie's interesting book will be familiar.[1]

III

Up to this period the opening of medical work had been almost entirely confined to the chief commercial centres on the coast and the treaty ports, and indeed it was not until after the treaty of Tientsin in 1858 that foreigners were permitted to travel inland. But from the 'sixties onwards, the great advance into the interior provinces began, led in most instances by members of the China Inland Mission.

For years before the doors had opened James Hudson Taylor—most romantic of dreamers and most practical of saints—had been poring over the map of China and praying for its untouched provinces. He had also been increasing his medical knowledge and practising his skill in successful dispensaries at Ningpo and Hangchow, and had been training a band of men whose highest ambition it was to preach the Gospel in the most inaccessible regions. Thus when the

[1] *Thirty Years in Moukden*, by Dugald Christie, C.M.G.

gates swung back, the China Inland Mission was ready to take instant advantage of the opportunity and was the first to occupy many of the inland provinces.

In HANKOW it fell to Dr F. Porter Smith, of the Wesleyan Missionary Society, to introduce modern medicine to the people, and his zeal as a missionary, coupled with his gifts as a doctor, eminently fitted him for pioneer work. In an interesting review of Porter Smith's life Dr Maxwell thus describes the early stages in Hankow :—

> Very soon two small houses were rented as a hospital, the work at which touched before long all grades of life at Hankow. Officials, both civil and military, priests and people alike, sought Dr Smith's assistance. One of the chief officials in the province of Hupeh sent his little daughter from Wuchang to reside near the hospital in order that she might obtain the services of the doctor. A military mandarin of high position, after his recovery, appeared one day in his official visiting robes, and attended by his full retinue of servants and attendants, in order that personally and publicly he might thank the doctor. There was no longing in those days for western science, but rather an utter scorn for everything and every person from the West, and it is a tribute to medical missions that even under such conditions the proudest was willing in the day of his distress to come and receive at the doctor's hands.
>
> In 1866 the first hospital ever erected in Central China for the relief of the suffering was opened by Dr Smith. Sanitation also, and hygiene for the million, were dealt with by means of tracts written by the doctor, and distributed broadcast by the generosity of the Commissioner of Customs. A work on the *Materia Medica and Natural History of China* laid the foundation of a good deal that has been written in later years by other pens. Dr Smith became the trusted friend of many of the native doctors. Often might he be found seated behind the counter of a native doctor's shop, pre-

scribing native drugs in conjunction with an enlightened native doctor.[1]

By the year 1880 the north-westerly province of SHANSI is being invaded, another C.I.M. pioneer, Dr Harold Schofield, leading the assault. He was, in some respects, the most remarkable man who had volunteered for medical work in China up to that time. Educated at Owen's College, Manchester, and at London and Oxford Universities, he had carried everything before him, securing scholarships to a total value of £1,400, and on one occasion needing to requisition a cab in order to carry home his load of prizes. At Owen's College he obtained the Victoria Scholarship in classics, and was elected an associate of the College. At London University, where he took his B.A. and B.Sc. degrees, he was first in the Honours List in Zoology and third in honours in geology, paleontology, and classics. At Oxford he obtained an exhibition to Lincoln College, secured the Greek Testament prize of the University, graduated with first-class honours in Natural Science, and was awarded the Radcliffe Travelling Fellowship. At St Bartholomew's Hospital he won no less than five scholarships, including the coveted Brackenbury and Lawrence honours, completing his course by securing the Fellowship of the Royal College of Surgeons, in addition to obtaining degrees in arts and medicine

[1] *Medical Missions at Home and Abroad.* June 1910, p. 134.

at Oxford. At the conclusion of his work in London he did post-graduate study in Vienna and Prague, and served with the Serbian and Turkish armies. At this stage in his career almost any post was open to him, and a senior member of the staff of his own hospital was just approaching him with a request that he would collaborate with him in the preparation of a new work on physiology when he startled all his confrères by the announcement that he was going out to China to engage in medical missionary service.

There for three brief years he laboured, until typhus fever—that deadly enemy of medical men in North China—claimed him for a victim; but during that short period of service he made an impression on the people of Shansi that time can never efface. With all his brilliant successes he was one of the most modest of men and most earnest of evangelists, and his influence over individuals was deep and lasting.[1]

So the work extended, until, one by one, each of the remaining provinces was opened up to the work of the physician.

By the year 1887 more than one hundred and fifty medical missionaries had worked in China since Parker led the way sixty years before. Although these men had been the pioneers in every new centre that was opened up, it must be remembered that they were not the only means by

[1] See *Memorials of R. Harold A. Schofield*, by Dr A. T. Schofield.

which the benefits of modern medicine were being introduced to China. With the development of foreign trade which followed upon the various treaties entered into between China and foreign powers, a number of western physicians settled down at the chief ports—notably at Hongkong, Shanghai, Hankow, and Tientsin—and though for the most part their practice was confined to the European and American population, several of them took a keen interest in the relief of the Chinese, and co-operated most generously with the medical missionaries working in their midst. During some years while the Chinese General Hospital in Shanghai—founded by the London Missionary Society—was without a medical missionary superintendent, non-missionary doctors of the Shanghai European community took complete charge of the medical side of its work.

IV

A new and a most important chapter in the history of medical missions in China was opened with the arrival (in 1873) of the first woman physician, and the founding of special hospitals for women and children. Although China has no purdah system, and her female population has never been secluded in the same rigid fashion as is the case in India or in Moslem lands, there was never complete freedom of approach for a male physician, and it is certain that a large percentage

of suffering Chinese women failed to secure the medical attention that they were in need of, especially at the time of child-birth, because of their unwillingness to be attended by a foreign man.

It was in Peking that the first women's hospital was opened under Dr Lucinda Coombs, a graduate of Philadelphia, the first woman medical missionary in China. She was sent out by the Women's Missionary Society of the Methodist Episcopal Church in U.S.A., who in the following year sent Dr Sigourney L. Trask to Foochow. Dr Trask's work was remarkable not only for its own success but for the entrée which it won into the homes of the leading Chinese officials in this important provincial capital.

Meanwhile Dr Coombs was welcoming a colleague to Peking in the person of Dr Leonora Howard (now Mrs King), who was afterwards associated with Dr Kenneth Mackenzie in saving the life of Lady Li, the wife of the influential Viceroy, Li Hung Chang.

This story has been told before in many places, but it well bears re-telling. Mackenzie had found a dismal prospect awaiting him on reaching Tientsin at the beginning of 1879, for the medical mission had closed the year with a deficit, there were no foreign drugs in stock, nor were there any funds available to purchase them, still less to erect a proper hospital. A petition to the Viceroy produced nothing but a perfunctory acknowledg-

ment. Week by week, as the members of the mission met in prayer, this urgent need was made a matter of special intercession. At the close of one of these meetings a courier arrived to request Dr Mackenzie to accompany Dr Irwin, a British practitioner in Tientsin, to the Viceroy's palace, to see if western medicine could effect a cure where Chinese physicians had pronounced a case hopeless. The treatment which they employed, and the after-treatment subsequently carried out at their request by Miss Howard, proved entirely successful. Thus, by a happy combination of all forces, a great wall of prejudice was broken down, and the confidence of the highest official in the country secured.

The immediate result was the founding of a new mission hospital in Tientsin, the cost of which was borne by the Viceroy, and this subsequently led to the establishment of the first medical school ever attempted on western lines in China, and the full recognition of women's medical work. Women physicians were soon welcomed everywhere, and the entrance which they secured into the best homes of the Chinese did much to establish fresh contacts and to win new confidence and friendship.

Thus the work spread until the year 1900, when occurred the great Boxer uprising, that last and most desperate attempt to exclude from China—or at least from its northern provinces—all that

savoured of the West. Medical missions shared in the common turmoil: no less than twenty-two hospitals were burnt to the ground and four others stripped of their contents, whilst four medical men were counted among the martyrs, Drs G. Yardley Taylor and Cecil V. R. Hodge of the American Presbyterian mission at Paotingfu, and Drs W. Miller Wilson (C.I.M.) and Arnold Lovitt of Shansi.

This great tragedy proved but the prelude to an extraordinary awakening and advance in the years that followed. The medical missionary staff, which in 1902 totalled slightly over a hundred men and women, more than quintupled its numbers by 1917; and of the three hundred mission hospitals at work to-day in China full eighty per cent have been erected during the last two decades.

CHAPTER III

METHODS OF APPROACH

We cannot expect the Chinese to grasp with eagerness at our improvements; yet the cure of diseases, set down at once as fatal in their experience, must be likely to facilitate the introduction of our knowledge, and add most humanely to their comfort and civilization.—Sir Henry Halford, *President of the College of Physicians, London*, 1834.

The introduction of western medicine to the various classes who compose the three hundred and sixty million inhabitants of China has followed two definite lines of approach.

In the first place, there have been those pioneer efforts which have been made since the days of Colledge and Parker, and still are made to-day, in order to bring the blessings of the art of healing to the service of the people throughout the length and breadth of the land.

Secondly, there are those new impacts which are being brought to bear upon different sections of the community through the medium of the out-patient dispensary and other agencies of every hospital. In any attempt to study this subject, therefore, both of these sides must be considered.

I

It is quite impossible to understand the work of the medical missionary pioneer in China, to appreciate his methods, to sympathize with his difficulties, or to estimate his success or failure, unless one first has a clear idea of the problems which have faced him, and their underlying causes.

1. *The Redemption of the Medical Reputation.*— The first, and in some respects the most serious, of these problems arose from the attitude which the Chinese people, especially the educated classes, adopted towards medicine in general. This was due on the one hand to their tendency to associate sickness with the influence of evil spirits, and on the other hand to the low standard of medical science in China until quite recent times. A medical *profession* could not, by any stretch of imagination, be said to exist. Still less was there any recognized standard of practice. The better educated of the old-fashioned practitioners had a certain general acquaintance with the action of drugs, and a rough and ready knowledge of the treatment of some conditions, yet on the other hand the most enlightened of them had never had the advantage of the most rudimentary study of the fundamental sciences—chemistry, biology, anatomy, physiology, etc. Thus it is clear how much justification there has been for the people's

attitude, seeing that medicine was looked upon as very little more than a mixture of quackery, commercial exploitation, and superstition. Dr O. L. Kilborn has well described the position :—

> Anyone may be a doctor in China. There are no medical colleges, no examinations, and no diplomas. No licence is required for practice. A man makes up his mind to practise medicine, and hangs out his sign. He buys a book or two, and begins to read. As soon as he can get a patient, he will diagnose his complaint, write a prescription, and accept the very small fee which is given to the beginner. After varying fortunes for a year or two, he makes a "marvellous cure," surprising no one, probably, so much as himself. Likely as not his cure was effected by the method by which pins saved a great many lives in the small boy's composition—"By people not swallowin' of 'em." The medicines which brought about the cure were entirely harmless; nature's methods were not interfered with; and a cure was effected quickly and well. Now the new doctor's fame goes up, his patients increase, and his fees also take a rise.[1]

It is one thing to introduce modern medicine in a country where medical science has already won its way, and the doctor's position is thoroughly assured; it is quite another thing to try to do so in a country where medicine is held in disrepute, and the physician looked down upon by the educated classes. Yet such were the difficulties which the pioneers of medical missions were called upon to overcome in every province of China. They had to prove, by the solid merit of their work, that modern medicine does rest upon a basis of exact science, at the same time as they

[1] *Heal the Sick*, by O. L. Kilborn, p. 86.

were exhibiting, by life and precept, that great message of redemption—physical, moral, and spiritual—which they had come to proclaim.

2. *The Winning of Goodwill.*—The second problem which faced the pioneer is one which happily we can now begin to speak of in the past tense. The traditional Chinese policy of isolation and exclusion, which expressed itself in suspicion, fear, and prejudice towards everything and everyone from the West, engendered a deep antipathy towards the mission hospital, just because it was foreign. No sooner was a hospital opened, particularly in the inland provinces, than the doctor's motives became at once the object of discussion and criticism, and in many cases the most extraordinary rumours were circulated as to the horrible practices which he was supposed to be indulging in secretly. There was a time, for example, in the province of Hunan, when an influential official, Chouhan by name, published a series of inflammatory pamphlets declaring that the missionary doctors took the eyes from infant children for medicinal purposes and were guilty of the most flagrant crimes in their operations upon women. And this was typical of the reports that were often spread abroad concerning the work of the hospitals.

It must not be thought for a moment that the success which crowned Parker's efforts in Canton followed so inevitably or so rapidly in the more

remote portions of the country, where the dreaded foreigner was less well known. In such places the pioneer had to proceed with great caution, carefully picking his cases, and avoiding, as far as was possible, all risk of failure. At the same time he sought, by every means in his power, to cultivate the friendship and win the confidence of the people around him, and especially of such patients as were bold enough to entrust themselves to his care. But there was always with him the serious thought that he carried in his hands the lives of his colleagues and the reputation of his profession, and that any false step might jeopardize the prospects not only of his own work but also of the whole mission for which he stood.

3. *The Overcoming of Limitations.*—The third great difficulty arose from the lack of proper facilities for up-to-date medical work—no suitable premises to work in: no apparatus nor equipment: no nurses nor trained assistants, possibly not even an educated Chinese helper willing to be trained for such a work: not the least semblance of sanitation, nor of intelligent measures to prevent the spread of disease. The pioneer doctor had nothing but a limitless mass of human suffering and ignorance around him, a few instruments and drugs in his hand, an unshakable sense of vocation, and a dauntless faith in the sufficiency of God.

II

Such, then, were some of the grave problems which confronted the men who attempted to blaze the trail of medical missions in China. And it is to their patient and triumphant work that the remarkable change of attitude towards western medicine which has been seen in China during recent years must be ascribed.

To combat such difficulties was a problem of strategy. The following is a description, in a hitherto unpublished paper, of how Dr William Wilson, of the China Inland Mission, set to work to win his way in the far inland province of Shensi. After referring to his unsuccessful efforts to secure a foothold in the provincial capital, where the literati instigated a riot and forced him to leave, Dr Wilson writes :—

> Commencing work in Hanchong, so far in the interior, where foreigners were little known, and foreign hospitals not at all, it seemed the wisest plan to concentrate at first all our energies on a vigorous, efficient, and attractive out-patient department, and, later on, as the confidence of the people was secured, to develop a surgical in-patient work—even then at first limiting ourselves to operative cases where a speedy and complete recovery could be anticipated, before undertaking more serious surgical cases.
>
> We were fortunate in obtaining very suitable premises, one part constituting our dwelling-house, and the other, with a long street frontage, furnishing us, when fitted up, with a large well-stocked dispensary and consulting-room, together with commodious waiting-room for men and women respectively. Here we were soon rewarded with the joy of receiving steadily increasing numbers of patients, suffering

from all kinds of diseases, most of them similar to those met with at home, but in a far more aggravated condition, due to the deplorable consequences of native treatment. In a vast number of cases, such as skin diseases, ophthalmia, burns, ulcers, wounds, and all kinds of open sores, the utterly irrational methods of native treatment only perpetuate and aggravate the condition. . . . Thousands of such cases present themselves to the medical missionary, and while not perhaps particularly interesting from a professional point of view, he may continually rejoice that he is afforded abundant opportunity of curing diseases, alleviating a vast amount of suffering, and winning thereby the real affection and goodwill of his patients, to say nothing of the higher privilege still of daily carrying out Christ's twofold command to heal the sick and preach the gospel.

The Chinese doctor's ignorance of anatomy tells, of course, very seriously in cases of fracture of bones and dislocation of joints, and our treatment of a few such cases in our early days inspired a most encouraging confidence, resulting in many such cases coming to us, even from long distances. Cases of injury or disease necessitating amputation or the removal of tumours are, by his own confession, beyond the power of the native doctor; but coming to the hospital as a last hope, and there being operated upon under all the advantages due to chloroform and antiseptic treatment, the reputation gradually spread to great distances, so that it was not long before we were able to fit up accommodation and undertake in-patient surgical work.

Another important branch of the work was the curing of opium patients, who used, as a rule, to stay with us for a month. In the case of young men of sound constitution, we found the best results were gained by an immediate and entire withholding of opium in any form, and the treatment of symptoms as they arose. The deliverance from the opium crave was thus the more quickly effected, though, for the first few days, the physical distress was sometimes considerable. In older men, or men of weak constitution, or very heavy smokers, experience taught us that a less drastic method was preferable, and such would for two or three weeks be treated with medicine containing a steadily diminishing quantity of opium, till at

the end of that period no opium was being taken. Many hundreds of these passed through our hands, and in nearly all instances were able to return home freed entirely from this terrible crave and the demoralizing effects of the opium habit; best of all, many proved by their after lives that they were not only delivered from the bondage of opium, but had entered into the liberty of the children of God.

To make our medical work more widely known, and to inspire the people with confidence, we were glad to avail ourselves of the Chinese custom of accepting from grateful patients of the wealthier class the large handsome honorific tablets, on which the donor inscribes in letters of gold his name and official position, the history of his disease and finally, in very flowery language, his unbounded gratitude to the doctor who has so successfully undertaken his case. In a few years, more than ten of these, some as large as an average dining-room table, had been presented, and adorned the street frontage of our hospital and the walls of the dispensary and waiting-room.

The presentation of these tablets, as is customary in China, was always the occasion for a somewhat imposing ceremony. The grateful patient, accompanied by a dozen or more of his friends, marched through the streets in full official dress, accompanied by a band of musicians, and in the procession an honoured place was assigned to the tablet, carried by bearers and festooned with scarlet silk.

The formal presentation and speeches over, the tablet was hung in the place allotted to it, and the guests were invited to a feast, after which a general inspection of the hospital and any objects of interest usually occupied their attention for an hour or two; thus was afforded a fresh opportunity for friendly intercourse between the missionary community and these representatives of the literary and official class, which, especially in those days, was the most difficult class to reach. Such occasions naturally gave scope for conversation as to our real purpose in coming to their land, and on leaving, each guest was presented with portions of the Scriptures and other Christian books.

Concurrently with the opening of out-patient

dispensary and hospital, as described by Dr Wilson, attempts were also made in many centres to extend the work of the medical mission over a wider area by means of itinerating tours. Important cities and market towns were thus visited on regular days, usually once a month or thereabouts, and on each visit patients were seen and evangelistic addresses given. This work, whilst not very satisfactory from the professional standpoint, certainly helped to familiarize the people of the district with the objects and work of the medical mission hospital, and probably encouraged some patients, who would not otherwise have done so, to take the journey to the medical mission station for purposes of in-patient treatment. From such humble beginnings many a branch of the Christian Church in China has sprung.

III

It is not only in the more remote parts of China that contacts are made with new sections of the community in the manner described above. Hardly a day passes in the out-patient clinic of any mission hospital but there are included, amongst those who come for help, numbers of men and women who have never before been brought into touch with western medicine, and who have not the slightest acquaintance with the teachings of Christ. They have come because of their physical need, which

hitherto they have found no one able to relieve. But away back in their village or country town they have met another patient, possibly suffering from some affliction very similar to their own, who has told them of the relief that he has already obtained at this particular hospital; and this is what has led them to take the journey and make their way to the out-patient department.

Readers of missionary publications are sometimes so impressed with the progress that has been made at particular stations that they are apt to lose sight of the enormous mass of untouched population which forms the hinterland of each and all such centres. It is from this teeming hinterland that these patients come, and it is just this fact which invests the out-patient dispensary of every mission hospital with all the importance of a great Extension Department. It is here that first impressions are going to be formed—impressions which in many instances will never have the opportunity of being corrected or amplified by subsequent residence in the hospital wards, or by closer contact with those who profess to represent and serve the Greatest of all Physicians. It is here also that the patient will make up his mind, not merely about the western doctor and his methods of investigation and treatment, but also about the new truths which, as he learns, the hospital is intended to promulgate.

It is no small matter for the doctor to stand up before men and women of this kind and to reflect that he and his assistants represent—if one dare to use the term—the only manifestation of the Great Father that some, at least, of these patients will ever meet. A discourteous reception; dry, perfunctory preaching; slipshod methods of diagnosis; impatient or hurried treatment—these things, which might under ordinary circumstances be easily excused on grounds of pressure, take on a new significance when it is remembered that these are the impressions which it will take longest of all to efface, and that they will effectually distort the image of the Christ which the doctor would fain have presented to the patient's view.

There is only one deduction that can be drawn from this: the out-patient work must be treated very seriously—far more seriously than is sometimes the case in hospitals to-day, where the doctor, overburdened as he often is with the pressure of the wards and of the countless other duties that fall to his lot, is apt to relegate his out-patient department to the care of a poorly-trained Chinese assistant and evangelist.

Here in the West emphasis is being increasingly laid upon the importance of senior members of the leading hospitals taking an actual share in the treatment of out-patients; and the same is true in China. Even where a qualified doctor is

single-handed it is a great question whether he would not, in the long run, be doing a bigger and better service to China by deliberately limiting himself to such numbers (in-patients and out-patients) as he could do real justice to. This does not mean that he should concentrate all his time and attention on a favoured few, whose cases should be investigated with greatest minuteness ; but it does mean that he should organize the work so as to safeguard the impression which is being made on the patients, and prevent the possibility of anyone who has been received in the out-patient department going away with the feeling that he has not been properly looked after, or his case not thoroughly investigated.

Nothing is more difficult than to curtail the number of patients, especially in a country where terrible suffering and disease abound on every side, but it must never be forgotten that, in any case, western doctors are not able to do more than touch the barest fringe of the work. It is often stated, for instance, that in some particular province or district there is only one fully qualified physician to half a million or a million of people, as if forsooth he were able in some way to be of some service to such a number. The probability is that not one in every hundred ever come near him when they are sick, nor could he possibly attend them if they did.

There are four points in connection with the

out-patient side of the work which are specially worthy of notice.

1. It is of the utmost importance that patients should always be regarded as *guests*, and be received with courtesy and kindness by the gate-keeper or registrar whom they first meet. He is the first representative of the hospital to come in contact with the new patient, and first impressions go a long way to determine the patient's attitude to the institution.

2. Any evangelistic service which is conducted for the patients should be of a character worthy of the great cause which is to be proclaimed, and calculated to emphasize the winsomeness and graciousness of the Message. It must never be forgotten that the patient has not come to the hospital for the sake of attending a religious service. He has come because he is sick, possibly he is in pain, and he wants to be helped. He will not as a rule object to listen to an evangelistic address while he is waiting for the hour at which the clinic is due to open ; but if that address is to grip him it must be presented thoughtfully, earnestly, and with every possible consideration for the condition of the hearers.

A very good plan that has been tried with success in at least one hospital in China is as follows :—

As the out-patients begin to gather the evangelist and his helpers, instead of keeping up a continuous

preaching performance as is so often the case, mingle with the patients, and get into general conversation with them one by one. They find out where they have each come from, and what it is that has brought them to the hospital, at the same time explaining to them, in a simple way, the procedure that is to follow—how long it will be before the doctor comes ; in what order they will be seen ; where they will get their medicines ; what they will have to do if they need to be admitted to the wards, etc. In these and similar ways they gain the confidence of the patients, and make them feel that they have their interests at heart.

About twenty minutes before the clinic is to open a bell is rung, and an announcement is then made that a short service will be held, at which all are asked to sit quietly, special stewards being appointed to show into their seats any fresh patients who may arrive during this time. The service opens with a brief introduction, in which the evangelist, or better still the doctor himself, explains simply why such a gathering is held. He tells them of the great Gift which the hospital tries to represent, and points them in simple language to the Father who cares for them all.

Having made this introduction, and shown them how that Father may be approached by all who care to do so through the use of prayer, he asks them all to stand reverently in their places

while he offers up an intercession on their behalf. Prayer concluded, an earnest address is given, usually on some incident in the life and teaching of Jesus Christ, and a strong appeal is made to all to study for themselves the truths of the gospel.

As the hour for the opening of medical work strikes, a second bell is rung, and at this signal the evangelist and his helpers leave the platform and mingle once more with the people. The early-comers, whose registration number will entitle them to be seen first, are directed to the proper door, while the evangelist sits with those who have some time to wait, explaining in more detail what has been said during the service, offering portions of the Scriptures or other books for sale, and attempting to draw them into conversation. In this way he soon learns to recognize those who are coming regularly for treatment, and in some cases is able to obtain an invitation to visit them in their own homes, there to follow up the impression that has been formed.

3. The investigation of the patients, prior to the adoption of any particular line of treatment, should be as careful and complete as possible. Superficial medical practice ill accords with a fervent religious service. If the work of a mission hospital out-patient department is to be properly done, both the religious and the professional sides should be treated as of the utmost importance, and neither should be sacrificed for the sake of

the other. It would be better to give up the evangelistic service or the medical work altogether than to treat either so carelessly as to convey the impression that it was only of very secondary importance.

To do real justice to the medical care of the out-patients, the enthusiastic work of the doctor himself is essential, and he needs to have a well-trained staff and adequate equipment. In a country like China, where parasitic and blood infections abound, the more modern hospitals are finding that they need not only well-fitted examination- and dressing-rooms in their out-patient departments, but that a small clinical laboratory in constant use is also an indispensable adjunct for thorough investigations. Fortunately the Chinese make excellent technicians, and it is not difficult to train them in laboratory methods.

4. The *human* side of the work is the supreme thing and must always be paramount. It may not be very easy for the doctor himself, in the rush of his work, to spend a large amount of time talking with individual patients, but his attitude towards them and the attitude of his helpers will count for everything. Here, for example, is a poor old man who has tramped fifty or a hundred miles in the hope of recovering his sight, because he has heard of someone else who was operated on for cataract with most successful result. But a glance is sufficient to show that his trouble,

unfortunately, is due to a very different cause. His is a case of absolute glaucoma, for which nothing can possibly be done. It is a bitter disappointment for the old man, and very hard for him to understand; but it is going to make all the difference to him if the doctor spares a few moments to talk to him sympathetically about it, and then perhaps leads him to one of the nurses or other helpers, who will explain more fully why his case is incurable. And after all, it is these human impressions which are the most potential.

Some years ago a Chinese patient suffering from cataract consulted a friend of mine, and was successfully treated. Subsequently there came from his district a procession of seven blind men, walking one behind the other, each touching the shoulder of the one in front. They had tramped for many days across the mountains, in hope of a similar cure. When they reached the hospital it was immediately evident that no cure was possible in any of their cases. But they were received and treated as guests, and their confidence and friendship were won. For very many years one of those blind men was an untiring and successful evangelist, not only to the blind but to those who were more fortunate than he; this all resulted from his stay in that hospital. It certainly pays to treat the human factor as the most important of all.

IV

China is sometimes spoken of as a country which is now well covered with missionary agencies of every description, and in which mission hospitals and dispensaries abound. It is not difficult to demonstrate how completely fallacious such a statement is. Throughout the whole country there are not yet more than three hundred mission hospitals (possibly three hundred and fifty, if branch dispensaries are included), and the majority of these are situated in the large cities and towns near the coast.

It must also be remembered that mission hospitals are small; the largest in China would not contain more than three hundred beds. A careful estimate has recently been made, based on the records of two hundred of these hospitals, in order to ascertain how much accommodation they are able to provide for the needs of the community. This has revealed the fact that there is but one mission hospital bed at present to every 26,640 of the population.[1] To this should be added the relatively small aggregate number of beds provided by the Chinese government and private hospitals which are just coming into existence, and also the accommodation for Chinese

[1] *An Enquiry into the Scientific Efficiency of Mission Hospitals in China.* Reprinted from *China Medical Journal*, November, 1920, *Hospital Supplement.*

afforded by the Community hospitals of the Roman Catholic Church.[1]

In this connection the statistics of the individual provinces are most enlightening, revealing, as they do, the tremendous stretch of unoccupied line which the more remote portions of China still present. They are as follows :—

Province of	Fukien . .	1 bed per	9,210	of population
,,	Kiangsu . .	,,	9,240	,,
,,	Chekiang . .	,,	9,850	,,
,,	Kwangtung .	,,	11,940	,,
,,	Manchuria .	,,	20,100	,,
,,	Chihli . .	,,	20,130	,,
,,	Hunan . .	,,	23,700	,,
,,	Shansi . .	,,	31,130	,,
,,	Hupeh . .	,,	36,590	,,
,,	Shantung . .	,,	38,240	,,
,,	Honan . .	,,	42,550	,,
,,	Kwangsi . .	,,	44,000	,,
,,	Szechwan .	,,	68,180	,,
,,	Anhwei . .	,,	70,800	,,
,,	Kweichow .	,,	76,500	,,
,,	Shensi . .	,,	81,250	,,
,,	Kansu . .	,,	86,540	,,
,,	Kiangsi . .	,,	151,600	,,
,,	Yunnan . .	,,	246,490	,,

These figures will be appreciated if it is remembered that in the United Kingdom there is a

[1] According to the statistics given in the appendices to *The Catholic Church in China*, by Rev. Bertram Wolferstan, S.J., published in 1909, the Roman Catholic Church was supporting 82 hospitals and 328 dispensaries in China in the year 1907, in connection with its various branches. Most of these institutions, however, appear to have been in charge of Catholic priests, lay brothers, or sisters of mercy, only a small proportion of the patients being attended by qualified western physicians.

bed in a voluntary hospital for one in every six hundred of the population, and this does not include the large number of additional beds provided by the Poor Law infirmaries.[1]

How is the territory to be covered? There are three principal methods that are worthy of careful consideration :—

1. *Branch Dispensaries.*—In order to widen the area served by existing hospitals, as many branch dispensaries should be established as it is possible adequately to man.

The distance from the main hospital at which such dispensaries can be effectively worked must depend upon the facilities of communication, as well as the strength of available staff, as it is essential that they should be administered from the central institution and be visited regularly. Well-trained Chinese workers should reside at these outposts, capable of dealing with the spiritual needs as well as the minor physical ills of the people. Such dispensaries will not only make provision for the large number of patients who do not require prolonged hospital treatment, but will also act as collecting stations for the more serious cases who need to be transferred to the central hospital.

The success of this method depends upon the main hospital and its branch dispensaries being

[1] In England and Wales there is a hospital or infirmary bed for one in every 320 people.

organized as a single unit, under the control of a fully qualified and experienced medical staff. The late Dr Arthur D. Peill of Tsang Chou was a life-long advocate of this policy, which has since been developed by his brothers and many besides.[1]

2. *New Medical Mission Centres.*—It is impossible to study a map of the unoccupied territory in China without realizing the urgent call for the opening up of new medical mission centres. Men and women are needed to-day who will take the torch from the hands of the pioneers, and will carry the new light into the remote and backward portions of the country. This will not be easy work. It will entail loneliness and isolation in a land where other missionaries are enjoying the stimulus of professional comradeship and the facilities of adequate equipment. But the thing is worth doing, and it has compensations which those only who have tried it can fully appreciate. And in face of the limitless mass of human suffering which these neglected parts of China represent, and of the unique gift which the science of medicine and the evangel of redemption have to offer, no one worthy of the profession can resist such a call if it comes to him.

3. *The Development of Chinese Leadership.*—Upon the nations of the West has been placed the great responsibility and privilege of carrying to

[1] Vide *The Beloved Physician of Tsang Chou*, edited by Rev. J. Peill.

the Orient those priceless blessings with which modern medicine has endowed them, and thus of leading the way in the medical missionary enterprise of to-day. But in the physical salvation of China, no less than in her educational uplift and spiritual regeneration, it is the Chinese leaders themselves who are the great and important factor, and it is to them that the future will increasingly look. That does not mean to imply that the West can now regard her work as accomplished, and shift her responsibility on to the shoulders of her Chinese brethren. Far from it. There never was a day when the opportunity and the need presented such a clamant appeal for western help. But it does involve a resolute and persevering policy deliberately to promote the Chinese at the expense of the foreigner. And this will never be achieved until we learn to discover and develop the immense capacity for leadership latent in our young Chinese students, both men and women.

CHAPTER IV

THE EVOLUTION OF THE HOSPITAL

All the larger rooms,
Lofty and bare, they made their hospital,
In which by night and day they ministered
Unto their sick; and these were always full.
And all of them had diligently learnt
The art of healing, and among them were
Some surgeons and physicians much expert.
But mostly those, whom they received within,
Were stricken by diseases, tedious more
Than mortal, needing tenderness and care:
. . . . .
And all as brethren, they compassionately
Waited upon, and tended. . . .
A house of holy service and of peace
Was this they dwelt in; living in one bond
Of purity, and brotherhood of love;
Speaking but little, praying, praising God
With joyful service of the hearts and hands.

HARRIET ELEANOR HAMILTON KING
The Disciples, 1872.

PRIOR to the introduction of modern medicine into China there was nothing in the whole country that was at all analogous to the western hospital. There were, it is true, a certain few Chinese Benevolent Associations, but they were chiefly concerned with the distribution of food to the indigent, or the care of foundlings, etc. There

was no Chinese institution that undertook to receive and treat the sick poor.

What happened then in case of serious illness ?

In the first place, the local physician was called in, and if his prescription failed to give immediate relief a selection of others would be summoned, limited only by the finances of the family.

The next step was usually the invocation of religious aid. All over China are to be found temples of medicine, mostly created in honour of celebrated physicians of prehistoric fame. Many an ancient tree outside a Chinese town or village has a similar shrine of healing—the abode of some mythical animal of fabulous powers, or other supernatural being. These trees are favourite resorts in times of sickness, and their gnarled branches present a strange appearance of dilapidated splendour from the worn-out banners suspended from them—the votive offerings of grateful worshippers.

I well remember a visit I once paid to the Temple of Medicine in an inland city. A care-worn woman was entering the outer court as I approached, and a few minutes later, having made her offering of money to the priests, she was admitted to the innermost precincts of the building. There the chief idol was enthroned, and having placed her sticks of lighted incense before the grotesque figure, down she knelt low, knocking her head on the hard stones, and giving

voice to her petition. A cylindrical box was handed to her containing several bamboo slips, each bearing a different number; and as she swayed backwards and forwards, calling upon the idol in a low crooning voice, so she shook the open box, until one of the slips fell to the ground. The priest, who had been watching her, at once stepped forward and picked it up; then, glancing at the figure which it bore, he walked across to the other side of the temple, and tore down from the wall a paper with a corresponding number. This he handed to the poor suppliant, with a brief word of instruction as to the way in which it was to be used. A moment later she was speeding homeward, there to try the effect of this new "cure" upon her loved one.

In some cases such a paper would contain a prescription for medicine, or a few words out of a sacred book. In one instance that came under my notice the priest gave orders that the paper was to be soaked in water and the inky fluid drunk by the patient—an old man suffering from dysentery. On another occasion a Chinese lady, who was pleading for the life of her husband, evidently "drew" an unlucky number, for the notice that was handed to her contained a declaration that the sick man had offended against the gods, and could not recover. (He did, though, thanks to the splendid nursing of a Christian Chinese friend, who came to the rescue!) And

this was all that the temple had to offer. Where there was extreme poverty, even this meagre consolation could not be sought, and the poor invalid was left untended, and oftentimes alone.

I

It was to conditions such as these that the pioneers of western medicine in China addressed themselves, and they set to work immediately to establish hospitals wherever they could secure a footing. By the year 1850 there were at least ten such institutions, by 1889 the number had grown to sixty-one. Since that date the increase has been still more rapid.

In those early days there was considerable and frequent discussion as to the relative value of medical itineration work or of centralization in hospitals, but experience early convinced the large majority of medical men of the superior value of an intensive policy, with the result that the work of the medical missionary has increasingly become centred in the mission hospital.

It must not, however, be imagined that the hospital in China in former days—and in many centres to-day also—bore much resemblance to the type of institution which we associate with that name in Europe or America. Far from it. The buildings of the old-time hospital, which

for the most part consisted of adapted Chinese premises, were most primitive in character, and the organization was still more so.

Under the arch of an ornamental Chinese gateway, at the side of which a small room accommodated the gate-keeper or registrar, the visitor passed into an open courtyard where the patients and their friends assembled. Ranged round the court were several one-story buildings —rooms for the hospital employees, a shed for sedan-chairs, a stable for the temporary shelter of the animals which brought patients from long distances—whilst on the further side there was usually the out-patient dispensary, with its waiting-rooms for men and women, its preaching chapel and consulting-rooms.

Similar courtyards opened out beyond, some reserved for male patients, and others for women. Each consisted of a series of one-story rooms arranged in rows or around a central square. These rooms measured approximately eleven feet by ten, but in many cases three or more would be built side by side without partition walls, so as to make a long " ward."

The walls were either of porous brick or adobe, and the floors of beaten mud, Chinese " concrete " or brick tiles ; whilst the windows, at any rate in the quite early days, were invariably of paper. These windows were seldom made to open effectually, and it must be confessed that neither

ventilation nor cleanliness was a marked feature of these old hospitals.

The furniture of the ward was of the scantiest description, and probably consisted of nothing more than a few Chinese beds (wooden or bamboo), a table or two, and some chairs. Everything else was provided by the patient, who brought his own clothes to sleep in, his own bedding to lie on, and his own friends to nurse and feed him. It is perhaps well to draw a veil over that bedding and clothing, and to bury its entomological contents in a decent silence!

A small lean-to shed, with a primitive stove, served as a kitchen. Here the patient's friends, or the hospital cook, prepared whatever the sick man fancied. It was almost impossible for the medical staff to maintain adequate control over the patient's diet, and, as likely as not, a man suffering from severe dysentery would surreptitiously procure a solid meal of dumplings, or slake his thirst with a hard pear.

Even if the hospital possessed a bathroom, it was hardly of such a sort as would tempt an unwilling patient to make experiment with soap and water.

An ill-furnished, but well-kept operating room, where some remarkably successful operations were performed, usually completed the hospital plant.

Such was the old-time hospital, and such its handicap—the lack of trained nurses, the absence

of any real control over the patients, the impossibility of ensuring ordinary cleanliness, to say nothing of asepsis. But as we read the records of the work that was successfully accomplished we cannot withhold a tribute of admiration for the courage and skill of the medical men, and incidentally for the efficiency of the "anti-bodies" of the average Chinese patient!

It is obvious that such a building was not a hospital at all, in the modern sense of the term. It was really a hostel or inn, in which the patient resided with his friends whilst attending the doctor, and where he was always accessible to medical treatment and spiritual influence. But whilst not possessing any of those accessories which go to make up the hospital of to-day, and which have proved to be indispensable to the modern investigation and treatment of disease, the old-time hospital had a value which should never be underrated.

One great advantage of such a building in the early days was that its unpretentious appearance soothed the suspicions of would-be patients and their friends. This was a very important matter in times when the mental attitude of the patient was the most difficult of all obstacles to be overcome. A hospital which looked exactly like their own Chinese house and in which they could live and eat and sleep very much as they did at home could not after all be such an uncomfortable

or foreign place. Thus their apprehensions were allayed; and the kindness and sympathy with which they were received rapidly won their confidence and friendship. In this way the old-time hospital laid the foundation for every advance which followed, and for developments which would have been impossible but for the work and influence of those very primitive institutions.

Then again, even in such rudimentary accommodation, doctors were able to carry out certain forms of treatment, especially of a surgical character, which it would have been impossible otherwise to attempt. Some of these simpler operations, performed with uniform success a great number of times, did more than anything else to inspire confidence in western medicine, and to familiarize the Chinese with its beneficent results. Moreover the western doctor, often quite single-handed at the outset, quickly gathered around him a little group of Chinese assistants to whom he gave a simple course of training in the elements of hospital routine. Such instruction was necessarily of a very elementary character, as the assistants of those days were drawn from the less educated classes. But the Chinese have a natural facility for practical work, and thus were easily trained to become valuable helpers in the operating room, as anæsthetists and dressers and also as dispensers.

With such a staff to assist him, the doctor's

sphere of usefulness rapidly grew, and though it was not possible to do very much for cases that required skilled nursing or elaborate medical treatment, he generally succeeded in building up an extensive surgical practice, and in obtaining some very striking results. Probably it is due to this fact as much as to anything else that western surgery has obtained a far wider reputation in China than that which has hitherto been accorded to western medicine ; but with the advent of the *modern* hospital, and the employment of up-to-date methods of investigation and therapeusis, the foreign physician of to-day has every prospect of securing the same measure of confidence as is accorded to the foreign surgeon.

But the value of the old hospital did not merely rest upon the opportunity which it afforded for a wider use of medical and surgical skill. No sooner did the missionary begin to grapple with the immense problem of China's suffering than he realized that he was engaging in a much sterner conflict than appeared on the surface. Deeper, far deeper, than the physical ills of the Chinese patient was a problem of mind and spirit which medical science alone could never relieve. To make provision for disease and suffering and turn out a series of " cures " with the regularity of so many Ford cars, whilst it might go a long way towards the alleviation of distress, was never going to solve the whole of China's problem, nor

provide that full restoration to health of which the Chinese people stood in such dire need.

Psychologists of those days knew considerably less than they do now of the intimate connection which exists between mental and spiritual outlook and physical disease. And to-day, looking backward over the years, we can see that the founders of those old-time hospitals built more wisely than they knew. Perhaps the very limitation of buildings and professional equipment under which they had to work helped to preserve their sense of proportion and to emphasize the further function which the mission hospital must fulfil in ministering to minds diseased or souls in pain.

Certain it is that every mission doctor set out to carry a spiritual message to the patients who entrusted themselves to his care; and so wisely and considerately was this done that in most instances men and women who came into the wards with no thought beyond their bodily ailment became glad and eager listeners to the Story which was there unfolded to them.

Various were the methods employed in carrying out this purpose. In many hospitals a quiet hour was set aside each day when every patient who cared to do so was taught to read, and in that way became familiar with passages of Scripture and verses of hymns which have brought new life and power to men and women all the world over. In others special classes were

arranged for convalescent patients who were anxious to enquire more deeply into the truths of the Christian revelation.

But the most commonly used method was the simple service conducted daily in the hospital chapel, if such existed, or more commonly in one or other of the "wards." The following description of such a gathering may be taken as typical of what occurred in other parts of China (the original account has been slightly amended):—

The clang of the gong, which has just resounded, sends the workmen home for the night, and the bell we hear so shortly after is calling patients and helpers alike to Evening Service. Presently we see a little stream of people wending their way towards one of the wards. We might as well join the procession behind this old man limping along on a crutch and a back-splint, and see where it brings us to.

We enter a somewhat rough-looking ward, the beds crowded up together, with a lamentable disregard for the London County Council (or any other authorities') demands for air space, whilst in the centre are a number of forms arranged in rows, converting the ward for the time being into a sort of Mission Hall. The occupants of the beds sit or lie, in varying stages of sickness or convalescence. Here are two poor fellows who were only operated on this morning, and so far have but little interest in what goes on around them. There, up in the corner, is an old man who has just arrived, blind for over ten years, upon whom we are hoping to operate for double cataract. Opposite to him is a young man who has been suffering at the hands of unqualified doctors, and whose malunited fracture has had to be re-broken and wired together. These, and many like them, are the proper patients of the ward, but patients from other parts of the hospital are also here, together with our own helpers, and not only are all the forms occupied, but several find seats upon the end of a neighbour's bed. One or two former patients also are with us to-night for the service, and we always give a special welcome to such.

At the further end of the ward, underneath a large drawing of the Good Samaritan, is arranged a tiny table and chair for the leader, who to-night is our head assistant. A hymn is given out and sung (with possibly more vigour than melody) to a well-known tune; a short prayer is offered for blessing upon the service; and then the old story of the Lost Sheep is slowly read and explained. The talk goes on for nearly half an hour, with a brief pause every now and again to emphasize a point or to ask a question of someone who appears to be specially dense. Sometimes the address is enlivened by various unexpected incidents, as, for example, when a particularly interested hearer gives vent to audible comments on the sermon, or when the service is being conducted by a very original person.

One such man gave an address a little time ago on the story of the Impotent Man at the Pool of Bethesda. After exhausting the more ordinary applications of the miracle, he said: "Now you know, this story has another very important lesson for you to learn. Some of you have come here to hospital expecting to have your sickness treated or your operation performed the very day you come, and you make ever such a fuss if you have to wait a day or two. You ought to try and copy this man's patience, for he waited thirty-eight years before he had his disease attended to"!

It was that same speaker who, on another occasion, after watching us set a fracture for a poor beggar with a broken thigh, who had crawled to the hospital in a shocking condition of emaciation and sores, prayed in public on the following evening that "God would use the means which the doctor was employing to take the man to heaven."

But meanwhile we are forgetting all about the head assistant, whom we left giving the address. With simple forcible language, illustrated from the daily work of the hospital, he tells the patients of the fuller life to which the Saviour of men is calling them; then an earnest prayer is offered that they may one and all be found of the Good Shepherd and brought back to the true fold; and the service is over for the night.[1]

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[1] *A Quiet Evening in a Mission Hospital.* Vide *Medical Missions at Home and Abroad*, 1906, p. 165.

II

In the earliest hospitals accommodation was provided for any type of case that sought admission, and the only distinction that was made was in the matter of sex, male and female patients being housed, as a rule, in entirely different buildings and compounds. But as the work developed, special hospitals were opened in various cities for the reception of particular classes.

With the coming of women physicians, hospitals for women and children were established, many of which developed important maternity departments. It is difficult to do adequate justice to the remarkable service rendered by these institutions in a country where so little is known of the scientific treatment of women's diseases, and where indescribable suffering too often accompanies child-birth. If reliable statistics could be secured as to the prevalence of puerperal septicæmia and tetanus neonatorum in China they would undoubtedly startle the whole medical world. The Women's Hospitals have a splendid record to show of work accomplished in combating these and similar diseases.

The leper is another unfortunate class of sufferer for whom special provision has been made. Leprosy has existed in China from time immemorial, and there, as in other countries all over

the world, the disease has been regarded with dread, and the sufferer's lot has been a most unhappy one. Prevented from living at home, or in their native village, lepers usually join the overcrowded ranks of mendicants, and hundreds of them have doubtless ended their lives of misery with an overdose of opium.

The first Leper Hospital in China was established at Pakhoi in 1890 in connection with the work of the Church Missionary Society, Dr T. G. Horder being the doctor in charge. This institution rapidly grew, and one hundred and fifty patients—men and women—are now accommodated there. At the same time other centres also developed, notably at Siaokan (Hupeh province), where Dr Henry Fowler of the London Missionary Society has been making a lifelong study of this subject, and at Hangchow, where the Chinese gentry have subscribed generously towards the erection of the splendid Leper Asylum which Dr Duncan Main built there in 1915. Other refuges are being opened up for these unfortunate people, whose number is estimated at not less than four hundred and fifty thousand. The Mission to Lepers has now appointed Dr Fowler as its special representative for the Far East, with a view to the further development of this branch of service. At the same time it is hoped, in connection with the newer medical schools in China, to establish departments for

scientific research in the treatment of this disease. In this connection it is interesting to note that the drug upon which greatest reliance is placed by modern leprologists in their efforts to cure this terrible complaint, namely Chaulmoogra Oil, has been known to the Chinese for years past, and was successfully employed by Dr Hobson as long ago as 1854.

Refuges for the blind, such as those associated with the honoured names of David Hill of Hankow and Hill Murray of Peking, have as a rule been connected with the general work of the missions rather than with the medical branch of the enterprise. The same is true of special institutions for the deaf and dumb, of which the Home at Chefoo under the able superintendence of Mrs S. R. Mills is the most conspicuous example.

In the care of the mentally afflicted, however, it has been the medical missionary who has led the way, and the well-known name of the great American physician, Dr J. G. Kerr, will always be remembered in China in connection with this development. The Hospital for the Insane which he first advocated in 1872, and which was actually opened in Canton in 1898, was the first ever established in China, and as such has won the admiration of all classes of the people. It now has accommodation for six hundred patients, and is largely subsidized by Chinese officials who make themselves responsible for the support of

A Ward in an Old-time Mission Hospital

(*See page* 87)

A Ward in a Modern Mission Hospital

(*See page* 106)

patients whom they constantly send to the refuge.

Refuges for victims of the opium habit were established from earliest days in connection with mission hospitals, and hundreds of these unfortunate creatures have, in them, found deliverance and happiness.

Another development of more recent years has been the provision of sanatoria for tuberculosis in several centres, notably at Kuling and Hangchow, the latter being one of the many institutions connected with the work of the Church Missionary Society which owes its origin to the enterprise and administrative ability of Dr Duncan Main. These institutions are breaking ground which it is hoped the Chinese themselves will be able to develop and cultivate in the future.

III

The style of the old-fashioned hospital, originally dictated by the conditions under which it arose, continued long after these conditions had passed, and even to this day a large number of mission hospitals in China, especially in the interior, are operated on the same primitive lines as those already described. The causes of this are of two kinds. First, the financial stringency of missionary budgets, incessantly crippling plans for necessary development, tends in the long run to cramp the initiative of the missionary organiza-

tions in the field. Secondly, the way to progress is constantly barred by the lack of imagination on the part of committees and supporters at home, or by that inadequate conception of the medical missionary enterprise which regards it merely as a means to an end, and not as an end in itself. The difficulties created by this point of view have been well expressed by the veteran missionary, Dr James L. Maxwell. Writing on this subject sixteen years ago, he said :—

> All are agreed that the great end of medical missions, as of all missions, is the exalting and commending of Christ as the Saviour of men. But all are not agreed on the lines on which a mission hospital is to be wrought so as to accomplish this. In the main there are two prevailing ideas.
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> One idea is that it does not matter very much in what kind of building your medical and surgical work is performed, provided it gives you an opportunity of preaching the gospel to your patients ; and, further, that seeing that the spiritual results are the chief thing, there is no special call to lay yourself out for and to be ready to deal with difficult cases. Such cases will take up a lot of time, and will give the medical missionary a good deal of anxiety and trouble ; therefore, it would be well to cultivate only those cases that can be easily and quickly managed. Those who hold this view—and there are not a few on mission boards and among the Christian public who do hold it—are perfectly satisfied that in this way the greater gain is to be reached.
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> The other idea, that which prevails, though not universally, among medical missionaries themselves and their colleagues, is that a mission hospital ought to be laid out on the very best lines for securing the healing of the sick ; that the medical missionary should be ready, to the very utmost possible, to meet and deal with the most difficult cases, and that along these lines we may expect the largest ultimate spiritual results.
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> It will be manifest at once that the mission hospital ideal

must widely differ, according as the one or other of these two views is accepted.[1]

Dr Maxwell then went on to state the reasons for his strong conviction in favour of the latter view, which he summed up in the words: "An ideal mission hospital is one in which the ordering of all things has a primary reference to the healing of the sick, and into which the whole round of sufferers may come."

It is this larger conception of the scope of the mission hospital which is increasingly engaging the attention of medical men and women in China to-day—as well as of many at the home base—and which is responsible for the new developments which are taking place in medical mission policy. Once it is admitted that the mission hospital exists as an integral part of the full presentation of the Message of Christ, then it follows that the hospital itself must be made as perfect an expression of the ministry of Jesus as it is possible for us to make it. Every effort must be adopted to safeguard our hospitals from inefficiency on the one hand or mere commercialism on the other. No longer may the quantitative aspect of the medical mission monopolize our thought. Nor are the numbers of converts whose admission to the Church can be directly traced to the influence of the hospital the ultimate criterion of its success. Bishop Hoare's words, written twenty years ago,

[1] *Medical Missions at Home and Abroad*, 1905, p. 340.

find a response in the heart of every medical missionary still :—

> If we saw no spiritual results, if we saw no converts brought out by medical missions, if we saw no doors opened by their means, it would still be the bounden duty of Christian people to do what they can with this western science which God has given to alleviate misery and wretchedness, pain and disease, wherever it may be found.[1]

This emphasis upon the qualitative aspect of the work of the hospital is entirely in line with those two important axioms upon which students of missions to-day are more and more basing their policy. The first of these is that no country can be truly evangelized—nor set free from ignorance and disease—except through the efforts of its own sons and daughters. The second—and it is the obvious corollary of the other—that the work of every missionary in China, no matter what branch he or she may be engaged in, is primarily and essentially educative.

The permanent value of the evangelist's work cannot be expressed in terms of the number of people to whom he has personally preached, or given tracts ; it can only be truly expressed in terms of men and women in whom the Message has become self-operative. The greatest service he can render China is to call out and train a band of disciples of Christ whose passion is the saving and uplifting of their country.

[1] *Mercy and Truth* (Church Missionary Society), Feb. 1900, p. 41.

The same rule applies to hospital work. It is not enough that we regard our hospitals merely as a palliative for the immediate ills of a certain number of patients, nor even solely as an object-lesson of kindness and sympathy, great as that may be. The permanent work of medical relief is ultimately a matter of education even more than of curative treatment. We in the West escape the untold sufferings of so many thousands of Chinese patients, not because of the number of physicians at our doors to cure us, but mainly because of the great hygienic measures that have been adopted for the prevention of disease. We escape the horrors of typhus because we have learned to appreciate the vital importance of ridding our persons and our clothing of typhus-bearing vermin. Our children are saved from the blindness which so often accompanies small-pox in the Orient, because they are protected against smallpox itself. Our infantile death-rate is beginning to decrease because, at long last, the blessings of fresh air, of suitable diet, and of skilled nursing are beginning to be appreciated. Such considerations should be in our minds as we face the problem of China's suffering, of which so large and terrible a proportion is entirely preventable.

Even our smallest hospitals, if they are to be worthy of that name, should be a demonstration to the Chinese patients and a training-ground to

their own helpers in those simple lessons of cleanliness and hygiene and the kindly care of the sick, which have had such an enormous educative value in our own countries, and which are so desperately needed in China to-day. In that way forces will be generated which should have a permanent and increasing influence in promoting the health of the community.

Another reason which has led to the increased thought that is being given to this matter is the fact that mission hospitals are now no longer the only hospitals known to the educated classes in China. Hundreds of students and merchants who have travelled in Europe, in America, or in Japan, have had personal experience of modern hospital treatment in those countries, and are increasingly conscious of how far many mission hospitals fall short in scientific equipment and modern nursing methods. The last few years have also seen the starting by the Chinese themselves of several hospitals, one of which—the Central Hospital, Peking—was erected at a cost of nearly $300,000, and has been fitted out and equipped in the most modern manner. The graduates of the new medical schools in China likewise learn to appreciate the value of those special diagnostic methods which we associate with modern medicine, and to depend upon skilled nursing for the treatment of their patients.

If, therefore, the mission hospital is not to

become discredited in the eyes of the educated Chinese from a professional standpoint, but is to become a centre in which the highest scientific and spiritual ideals are pursued together, it is obvious that it must attempt to keep pace with modern developments—in other words it must become, in fact as well as in name, a Christian *hospital.* This is not a question of placing the scientific side of the work in antithesis to the evangelistic ; it is simply a question of ensuring that both are truly efficient, and worthy of that great Name which the hospital bears.

One of the first medical men in China to recognize this fact and to preach it, in season and out of season, was Sydney Rupert Hodge of the Wesleyan Mission, Hankow. As far back as 1891 we find him pleading in the *China Medical Mission Journal* for the coming of trained nurses to China, in order to make the work of the hospitals truly efficient ; and from that time until his death in 1907 his voice was constantly raised on behalf of every new development which was to improve the professional work of the mission hospitals throughout the country. " Dear old Hodge ! " as one great friend wrote of him, " nothing second-rate for his offering to Christ. Always the very best, in medicine, in science, in life." And to this, Dr Cecil J. Davenport adds :—

The standard he set up for himself, his work, his patients, his surroundings, was *the Best.* He was satisfied with nothing

less. . . . No half-up-to-date methods of work for the Chinese were allowed by him. His aim was quality rather than quantity, and he saw to it that his directions and lines of treatment were strictly carried out. He has raised a standard of medical work in Central China the influence of which will be felt for years to come.[1]

The influence of Hodge, and of medical men and women of his type, gathers force as the years go by. No question is exercising the minds of medical missionaries in China more deeply to-day than that of making their hospitals a real object-lesson to the Chinese, in professional standards and scientific efficiency as well as in spiritual power.

The China Medical Missionary Association, which was founded in 1886 with Dr J. G. Kerr of Canton as its first president, and which now has a membership of nearly six hundred medical men and women,[2] has continually lent the pages of its journal to a discussion of this topic. It was made the main subject for discussion at the last Conference of the Association, held in Peking in February 1920. In preparation for that conference a somewhat exhaustive questionnaire, dealing with every aspect of the scientific efficiency of mission hospitals in China, had been prepared during the preceding twelve months, and this was sent out to every medical mission station in the

[1] *Sydney Rupert Hodge*, by the Rev. J. K. Hill, pp. 59 and 100.

[2] Membership of the Association is not confined to medical missionaries, but is open to all physicians who are in sympathy with missionary work. See Appendix III for a fuller account of this important Association.

country. It is significant of the interest which this subject is arousing that, in spite of the lengthy and detailed character of the enquiry form, returns were received from no less than eighty per cent of the hospitals.

The enquiry brought to light the very difficult conditions under which many hospitals even in important towns and cities still have to carry on their work, owing to the utter lack of facilities for modern medical treatment. This is clearly shown in the following summary of some of the evidence which appears in its pages :—

34 per cent of the hospitals whose reports were received have no nurse whatever, foreign or Chinese, and 60 per cent not more than one trained nurse.

37 per cent depend entirely on the patients' friends for all nursing, whilst 62 per cent have no night-nursing.

37 per cent possess no bedding, or only sufficient for a very few patients.

58 per cent are unable to clothe their patients in clean hospital garments.

8 per cent only have a pure water supply, and 6 per cent only have running water laid on throughout the hospital.

50 per cent seldom or never bathe their patients, and 43 per cent have no laundries, or only inadequate accommodation for dealing with the hospital linen.

34 per cent do not possess a pressure sterilizer for their dressings, and 73 per cent have no means of sterilizing bedding or mattresses.

37 per cent have no protection whatever against flies or mosquitoes, and 65 per cent have no isolation block or courtyard.

31 per cent do not possess a laboratory of any kind, whilst 82 per cent have no bacteriological incubator.

87 per cent do not possess an X-Ray plant.

It will be seen from the above table how much leeway there is yet to be made up before these hospitals are worthily equipped for their work. At the same time there is solid ground for encouragement in the progress that has already been made, and in the new plans for advance which many mission boards are now contemplating. There are already, in different parts of China, nearly a hundred mission hospitals which are being operated on approximately modern standards, with up-to-date equipment, skilful nursing, careful and thorough investigation of disease, and above all, a determined effort on the part of every worker to manifest and proclaim the spirit of Christ in the whole work of the institution. This represents a force in the life of China whose far-reaching influence no one can estimate.

CHAPTER V

THE NEW PROFESSION IN CHINA

The greatest need of China is not, after all, for highly trained scientists, although they are essential; it is not, after all, for the greatest technical skill, although that is absolutely necessary if the great end is to be attained. But the great need of China is scientific knowledge and technical skill dominated by idealistic loyalty to the highest and best things in human life; and that idealism that is most enduring, that can be most counted upon, that is least likely to fail, is an idealism based upon a deep and abiding religious conviction.—GEORGE E. VINCENT, *President of the Rockefeller Foundation, March 4th*, 1920.

IT was characteristic of men of such far-sighted vision as Colledge and Parker that they saw, from the very commencement of their medical work in China, that the vast needs of the country could never be met except by the trained efforts of her own sons and daughters. And since China at that time had no Medical College of her own whatever,[1] they at once realized that one of the chief contributions which medical missions must offer should be in the direction of the training of Chinese youths in western medical science. Not only was this object included in the first statement

[1] The so-called Imperial Medical College at Peking, established from the time of the Yuen Dynasty (A.D. 1280-1368), merely existed for the conferring of degrees on court physicians. No instruction was given, nor were examinations conducted.

of the Medical Missionary Society, which as we have seen they founded in 1838, but already, in the preceding year, Parker had commenced to train three assistants in his hospital at Canton. Naturally enough such training consisted almost entirely of oral instruction of a practical character, on very much the same lines as in the old apprenticeship days in this country, for there were no Chinese medical text-books that could be employed, nor any facilities for laboratory work. But the clinical teaching which Parker gave these men was so successful that one of them, Dr Kwan-tao, subsequently obtained a reputation as surgeon and oculist that was almost as widespread as that of his teacher. On one occasion he was sent for by the Viceroy of Szechuan, nearly 2,000 miles away, upon whom he operated for cataract. He also performed various major surgical operations, one of which was the removing of a tumour which is said to have measured some three and a quarter feet in circumference—a performance which, in those days, must have made an enormous impression on the people, to say nothing of the patient!

The work of training Chinese assistants which Parker thus inaugurated was continued by various medical men who succeeded him, notably by Dr John G. Kerr of the American Presbyterian Mission, who, in a remarkable life of nearly fifty years of medical missionary service at Canton, not only helped to instruct some two hundred

students but also made invaluable contributions to the building up of the new Chinese medical literature, which, as we have seen, Benjamin Hobson had been the first to undertake.[1] Kerr personally translated over twenty medical text-books, comprising thirty-two volumes.

I

Thus was medical education commenced on a humble scale in China, and for the next fifty or sixty years similar classes for students were organized in various parts of the country, in connection with different mission hospitals. Most of these students came from poor homes and were deficient in general education ; but in spite of so many handicaps many of them became valuable workers and rendered great assistance in various hospital centres, both as physicians and evangelists.

Meantime the first steps were being taken towards the provision of a new supply of fully-trained Chinese physicians, by the sending abroad of students whose knowledge of English was sufficient to enable them to pursue their medical studies in Europe or America. The first of these was Mr Wang Fun, who was sent to Edinburgh through the generosity of some British merchants in Hongkong, and who graduated there with distinction in 1855. He returned to China in 1857, in connection with the London Missionary

[1] *Vide* p. 46.

Society, and Dr Henderson wrote of him a few years later : " There is not a medical man now in China who has a better knowledge of his profession in all its branches than Dr Wang Fun." [1]

Many years elapsed before Dr Wang's example was followed, and indeed it is only in very recent times that any considerable number of Chinese students have left their country to study medicine abroad. Most of these have gone to Japan, where, unfortunately, they have not as a rule attached themselves to the higher-grade Japanese medical schools, and thus have failed to secure the full benefits of modern medical science. There have, however, been some notable exceptions, especially amongst those students who have proceeded to Europe and America, the most conspicuous being Dr Wu Lien-teh, a graduate of Cambridge, now Director of the Plague Prevention Service of North Manchuria ; Dr S. P. Chen, also of Cambridge, who has charge both of the Central Hospital and of the Isolation Hospital, Peking ; and Dr F. C. Yen, of Yale, Dean of the Hunan-Yale Medical College at Changsha.

In this connection mention must be made of a brilliant little group of Chinese women students who have studied medicine in America. The first of these was Dr Y. May King, an adopted daughter of Dr McCartee of Ningpo, who graduated from the Women's Medical College of the New

[1] *Memorials of James Henderson, M.D.*, p. 179.

York Infirmary in 1885, took various post-graduate appointments, and finally returned to China to work in connection with the Reformed Church at Amoy. She was followed a few years later by Miss Hu King-eng, the daughter of a Foochow pastor, who subsequently returned to do splendid work in her native town.

In 1892 no little excitement was caused at the Medical School of the University of Michigan by the arrival of two Chinese girls to study medicine. They were the protégées of Miss Howe of Kiu-kiang, the one Miss Mary Stone (Shih Mei-yu) and the other Miss Ida Kahn. They completed their course in 1896, and no more popular figures took part in the graduation exercises of their year than those two dignified Chinese women in their native dress, of whom President Angell said : "Their future career will be watched with every expectation of eminent success." Their return to Kiu-kiang was made the occasion of an extraordinary popular ovation, the Chinese welcoming them with a huge demonstration in which some forty thousand fire-crackers were let off! Dr Mary Stone remained in Kiu-kiang, where in 1916 she treated no less than twenty-four thousand cases at the Danforth Memorial Hospital, and where she developed an excellent school for the training of Chinese midwives.[1] Dr Ida Kahn

[1] Dr Mary Stone has recently removed to Shanghai, where she has established a large nursing home and private hospital.

responded to an invitation to open up medical work in another huge city, Nanchang, where by the successful treatment of the wife of an official she opened the gates to Protestant missionaries.

II

The year 1881 is one that should long be remembered in connection with the development of medical education in China, for it saw the opening of the first medical school established in the country on a modern basis.[1] Its inception was due to Kenneth Mackenzie, who, on hearing that several Chinese students who had been sent to America for collegiate education were being recalled by the Government, at once memorialized the Viceroy of Chihli, Li Hung Chang, petitioning that eight of them might be placed under his care "for the study of medicine and surgery, with a view to their being utilized eventually as medical officers by the Government." Li Hung Chang not only acceded to this request, but also placed suitable premises at Mackenzie's disposal at Tientsin and became responsible for the financial upkeep of the school, giving Mackenzie full freedom for missionary work amongst the students.

Three classes were admitted to the school during

[1] Medical Schools were established in China in the reign of Sheng Tsung (A.D. 1068), of the Sung Dynasty, and were still further developed in the Yuen and Ming dynasties. Subsequently, however, they fell into abeyance.

Mackenzie's lifetime, each taking a three-year course. All instruction was given in English, mostly by Dr Mackenzie himself, who received valuable assistance from Dr Atterbury of Peking and from some of the British and American naval surgeons stationed at Tientsin. Nineteen men were graduated in all, and though Mackenzie wrote in 1887 that his hopes had not been entirely fulfilled, Dr Fred Roberts was able to write in the following strain four years later :—

> You will be glad to know that the former labours of Dr Mackenzie, in connection with the Government Medical School under his charge, have been far from fruitless. Up to the time of his death it seemed to him almost like labour in vain, seeing that the graduates were not successful in obtaining appointments. It is very different now. In close proximity to our own hospital is an imposing building, the Viceroy's hospital, managed for the most part by three of Mackenzie's former students, and with the prospect, if well conducted, of doing much good in the healing of the sick. In Port Arthur there is a naval and military hospital and dispensary which is much appreciated by the soldiers, and it also is worked by former students. Others again have been appointed to Wei Hai Wei, a naval station. Dr Chang has been accepted many months ago for the post of house surgeon to the Alice Memorial Hospital (L.M.S.), Hongkong; while, last but not least, Dr Mai has been for some time successfully treating the father of the Emperor in Peking.[1]

It is interesting to know that this medical school is still in existence, being now supported by the provincial government of Chihli, and known as the Peiyang Medical College, Tientsin.

In 1887 the Hongkong College of Medicine was

[1] *John Kenneth Mackenzie*, by Mrs Bryson, p. 376.

opened, with Dr Manson (now Sir Patrick Manson) as its first Dean. The London Missionary Society was closely connected with the college from its inception, the Society's hospitals being used for practical instruction, and their physicians assisting in the teaching work. It was in that college that Dr Sun Yat Sen received his education, and formed that friendship with Dr James Cantlie (then Professor of Anatomy and Surgery) that was to play so dramatic a part in his future career.

Other small medical schools slowly came into existence, mainly as a development of those classes for student-assistants which had been started in connection with various mission hospitals.[1] But it was after the Boxer uprising of 1900, when the need for constructive and educative work on a broad basis was brought home to all friends of China, that the first attempt was made to establish a School of Medicine in Peking. This was the first medical college to be established in China by the combination of both British and American medical men, and through the co-operation of missionary societies representing different religious denominations. It was organized by Dr Thomas Cochrane, of the London Missionary Society, who was fortunately successful in securing the patronage

[1] A series of successful classes of this nature had already been organized by Dr H. W. Boone at Shanghai, Dr Van Someren Taylor and Dr Osgood at Foochow, Dr Duncan Main at Hangchow, Dr Christie at Moukden, Dr Gillison at Hankow, and many others.

and financial support of the Dowager Empress and many of the leading Chinese officials, and who received invaluable assistance from such men as the late Sir Robert Hart, Sir Ernest Satow and Dr Douglas Gray. The college was recognized by the Chinese Government from the outset, the Board of Education giving a special diploma to all graduates and making an annual grant towards the support of the institution. A very able group of men was obtained as members of the teaching staff, many of whom, alas, passed away in early life. Such men were the late Dr H. V. Wenham—a man of exceptional charm and brilliant gifts, who had gone to China with a view to organizing such an institution himself, and with characteristic unselfishness threw himself into the Peking scheme—and Dr J. G. Gibb, of St Bartholomew's, Dr J. M. Stenhouse, of London Hospital, who died of wounds received during the recent war, and Dr Francis J. Hall, an American physician — men to whom the whole cause of medical education in China owes a large debt of gratitude. This college in Peking had the distinction of conducting its medical teaching in Chinese, aided by text-books which a special committee had translated into that language.

It was not long before other centres followed Peking's lead, and Missionary Medical Colleges, both denominational and union, were opened all over the country, with commendable zeal but

questionable wisdom. Not that there was not ample room for them all, and many more in addition, if the needs of so vast a country were taken into consideration; but the suitable men who were available to staff such institutions, and the funds from which to supply the extensive buildings and equipment needed, were both so limited that there was no hope unless the number of these colleges was reduced that any of them would be adequately manned or furnished. At the Biennial Conference of the China Medical Missionary Association in 1913 a resolution was passed, urging that no further Medical Schools be established until the eight Union Colleges then in existence were made efficient.[1] It soon became evident that even that number was far beyond the power of the missions to render effective.

In addition to the eight missionary medical colleges just referred to, all of which were confined to men students, three medical schools for women had also been established in China. In the South, Dr Mary Fulton—one of the pioneer women physicians in the Far East—laid in 1899 the foundations of what has become the Hackett Medical College, Canton. In Central China another pioneer worker, Dr Margaret H. Polk, made a similar effort at Soochow; whilst in the

[1] These eight were situated at Moukden, Peking, Tsinan, Hankow, Chengtu, Nanking (with Hangchow), Foochow, and Canton.

North a Union Medical College for Women was established at Peking. These three schools not only differed widely in their location, but also in the language employed for the instruction of the students, Cantonese being used at Canton, English at Soochow, and Mandarin at Peking.

Many valuable women workers have received their training in these institutions, but unfortunately the Women's Colleges, like the others, have been so starved for lack of workers and equipment as severely to cripple the efficiency of their medical instruction. Important steps are now on foot looking to the concentration of women's medical education in either one or two thoroughly efficient schools, and possibly to co-operation with one or other of the men's medical colleges. Such a plan, combined with a large expansion of staff and improved buildings and equipment, should ensure that the important work of training women medical students for the unique service that they can render to their suffering sisters in China will be placed on a satisfactory footing.

III

Meantime, however, important new factors began to appear on the scene. In the first place there came into existence a body of Chinese medical men who had received their training on modern lines, mostly in Europe and America, and who subsequently formed themselves into

a National Medical Association of China.[1] The leader of this group, Dr Wu Lien-teh, who is still known in England as Dr G. L. Tuck—the name he adopted while at Cambridge—lost no time in memorializing the Government for the establishment of modern standards of medical education, and outlined a suggested syllabus for the purpose. At the same time, various of the Chinese provincial governments began to show their keen interest in this work, not only by opening provincial medical colleges (as at Soochow, Hangchow, etc.), but also by co-operating in the development and support of some of the missionary medical colleges, notably that connected with the work of the Yale Mission at Changsha, and with the Moukden Medical College.

In the second place, other organizations interested in the progress of China began to take a share in the work of medical education. The University of Hongkong, which was established in 1907, incorporated the former College of Medicine. In a similar way were founded the Harvard Medical School at Shanghai ; the German Medical Colleges at Shanghai and Tsingtao (both since closed) ; and the Japanese Medical College at Moukden. But none of these organizations made so large a contribution to the cause of medical education, nor has exerted so profound an influence in the setting of modern standards,

[1] *Vide* Appendix IV.

as has been effected by the Rockefeller Foundation of New York. During 1914 and 1915 the Foundation despatched two influential commissions to China, including some of the leading university and medical men of the United States, "to enquire into the condition of medical education, hospitals and public health." After making an extended tour through a large part of China, in which they visited practically all the medical colleges, and personally inspected some eighty-eight hospitals, they issued a careful report, entitled *Medicine in China*,[1] in which they made a series of recommendations to the Foundation, of which the following is a brief summary :—

1. That the Rockefeller Foundation should undertake medical work in China.
2. That the Foundation should, so far as possible, co-operate with existing missionary institutions "which have already done such good work in China."
3. That medical instruction in which the Foundation is concerned should be on the highest practicable standard.
4. That the English language should be the medium of instruction in those medical schools with which the Foundation should become connected.
5. That the Foundation should commence its

[1] Published by the Rockefeller Foundation, 61 Broadway, New York.

activities in Peking and Shanghai, if a suitable scheme could be formulated for association with the missionary medical colleges in those two centres; and that, in addition, some assistance should be given to the Canton Christian College and to the Yale Mission in their plans for medical education at Canton and Changsha respectively.

6. That assistance should be given to the development of a higher standard of professional efficiency in various hospitals, commencing with those situated in the fields tributary to the medical schools aided by the Foundation. This assistance should take the form of grants towards the support of increased medical and nursing staffs, business managers, etc., and the provision of laboratory equipment for improved diagnostic measures.
7. That encouragement should be given to the training of nurses.

The recommendations of this Commission were adopted by the Foundation and a special organization created for the purpose of putting them into effect; this has been designated the *China Medical Board* of the Rockefeller Foundation.

The first act of this new Board was to enter into arrangements with the London Missionary Society by which the Board acquired the whole

property of the Union Medical College, Peking, vesting it in a new Board of Trustees, upon which the various missionary societies interested in the work in Peking, and the China Medical Board, are equally represented. An extensive property, formerly owned by one of the Chinese princes, was purchased, and here there has been erected what it is no exaggeration to describe as the most beautiful modern building in the whole of China, and one of the best-ordered and best-equipped medical schools and hospitals to be found anywhere in the world. An adaptation of Chinese architecture has made it possible to give to the buildings, in addition to the usefulness for which they were planned, beauty of design in harmony with the great architectural monuments in Peking, and pleasing both to the Chinese and to westerners. A sum approaching two million pounds sterling has been expended on this school, and every effort has been made to ensure that each department should be staffed by expert medical men, and furnished with everything necessary for up-to-date scientific work.

The missionary societies are co-operating in the selection of teachers for the school, and a number of the men who have already received appointments have been drawn from the ranks of medical missionaries. The whole cost of upkeep of the institution, which is, of course, very considerable, is being borne by the Rockefeller Founda-

tion, and there is no question that their action in thus founding a first-class medical school in the capital of China has done more to raise the whole prestige of modern medicine and of medical education than any other step hitherto taken in the country.

IV

As soon as the decision of the Rockefeller Foundation reached China, two serious questions confronted those medical missionaries who were engaging in the work of medical education. In the first place they had to face the fact that the best modern standards were now to be introduced into China, and there was a risk that it might possibly be said of the missionary schools that they were offering to the Chinese a type of medical education that was of a lower standard. At first there was a considerable feeling in some quarters in favour of retaining a number of low grade medical schools ; but the large majority of medical educationalists connected with the missions took the line that the Mission Boards ought to concentrate all their strength on just that number of medical schools that they could make absolutely efficient. To retire at so promising a stage was unthinkable, for that would mean the surrender of a wonderful opportunity of infusing medical instruction with Christian ideals and principles, and of winning a large number of future leaders

of the medical profession for the service of Jesus Christ.

Secondly, the Rockefeller authorities having decided to use the English language as the medium of instruction at Peking, there was a fear lest the splendid work that had been done in the creation of a medical terminology in Chinese, and the translation of medical text-books, would fall into abeyance. Whilst medical educationalists have been divided in their opinion as to whether English or Chinese is the best medium of instruction at the present time, it is almost unanimously agreed that both types of education should, if possible, be maintained, and at an equal standard of efficiency, as it is recognized by all that sooner or later the Chinese language must and will be universally employed for teaching all scientific subjects. This last fact necessitates that somebody must bridge over the gap which exists between the assimilation of medical knowledge in a foreign tongue, and the imparting of that knowledge in the language of the people. Surely therefore it is a sound policy that there should be preserved in China at least one or two first-class medical schools in which the materials for the building of such a bridge are carefully conserved, and added to year by year. Furthermore, if the students in such a college have a sufficient working knowledge of English to enable them to read medical books in that language with comparative

ease, the objection which is raised to medical instruction in Chinese, on the score that the graduates have too limited a medical literature from which to extend their knowledge and experience, falls at once to the ground.

The Council on Medical Education (of the China Medical Missionary Association) which was formed in 1915 took up the question with great seriousness, and sent a unanimous resolution to the China Medical Board, requesting that they would assist in the support of at least one medical college teaching in Chinese, and expressing the opinion that the school most suitable for such development was the one that was situated in Tsinan, the capital of the province of Shantung.

They further urged that all missions interested in the advance of medical education through the medium of Chinese in the great Mandarin-speaking area of east and central China should concentrate their forces in the development and support of that school. Such a recommendation carried with it the giving up of two medical colleges at Nanking and Hankow, where very promising work had already been done. But so strongly was it felt that a policy of concentration was absolutely essential if high standards were to be secured that even this great sacrifice of local interests was urged.

This proposal received the endorsement of the newly formed British Advisory Board of Medical Missions, as well as of many missionary leaders in

North America, and the transfer to Tsinan was effected in 1917–18.

At the same time the China Medical Board, whilst it did not feel able to undertake the responsibility of maintaining another school, invited the Tsinan authorities to receive three classes of students formerly under instruction at Peking, and in return for so doing made a generous grant of over £30,000 towards the cost of additional buildings and equipment, and the support of additional members of the staff—a grant which has since been augmented.

This concentration of forces in the Tsinan Medical School (now known as the School of Medicine of the Shantung Christian University) is probably one of the most remarkable instances of missionary co-operation in China, for it has brought no less than nine societies of Great Britain, Canada, and the United States, representing all the chief Christian denominations, into fellowship,[1] and in five cases out of the nine it has involved the transference of representatives of a mission to a part of China in which that particular society had no previous responsibility.

[1] These nine societies are: in Great Britain the Baptist Missionary Society, the Society for the Propagation of the Gospel, the London Missionary Society, the Wesleyan Missionary Society, and (to a less degree) the English Presbyterian Mission; in the United States the American Presbyterian Mission North, the American Presbyterian Mission South, the Norwegian Lutheran Mission; and in Canada the Presbyterian Mission.

It has, however, had the satisfactory result of enabling the Medical School to secure an expert faculty of more than twenty full-time teachers.

Besides Tsinan, the Council on Medical Education is urging the development of two other missionary medical colleges teaching in Mandarin. One of these is the well-known Medical College at Moukden, which will always be connected with the indefatigable work of the veteran Dr Dugald Christie and the glorious self-sacrifice of Arthur Jackson. Commencing as the offspring of the United Free Church of Scotland, it is now linked with the other two missions working in Manchuria, and receives strong support from the provincial government. The other Mandarin school is the Medical Department of the young and vigorous West China University at Chengtu, where British Friends and Churchmen link hands with Methodists and Baptists of Canada and the United States.

Two medical colleges employing English as the chief medium of instruction are also receiving strong encouragement from the China Medical Missionary Association. One of these is in Central China (Changsha), where the Yale Mission, in co-operation with the Hunan Government, has established an important school, in which the Wesleyan Mission is now taking a share, and in the establishment of which Dr F. C. Yen and Dr E. H. Hume have taken a leading part.

The other is at Shanghai, where St John's

University, together with the University of Pennsylvania Mission, has been carrying on medical instruction for many years past. Now that the China Medical Board has definitely decided to abandon its projected medical school at Shanghai, it is probable that this medical department of St John's University will be largely extended and placed upon a wider union basis.

At Canton, after many years of unsuccessful effort to organize a union school in which high standards should be set, encouraging negotiations are now taking place with a view to co-operation between the Canton Christian College, the Medical School of the University of Hongkong, and the historic Canton Hospital.

It has already been mentioned that the existing Women's Colleges are hoping to combine their forces so as to form at least one thoroughly efficient school for women. In addition to this, women students are now admitted to the new China Medical Board School at Peking, and the same arrangement will probably be made in other centres also in course of time.

V

The theory of medical training and practice described in this chapter is based upon an assumption which has frequently been called in question —that only the fully qualified doctor is good enough for China. Those who challenge this

assumption argue that in face of such an unrelieved mass of suffering as the population of China presents, and in a land where indigenous medical methods are so crude, it would be better to aim at quantity rather than quality, and for the mission colleges to turn out hundreds of students with a superficial knowledge of how to treat common ailments or to administer practical first-aid, instead of a mere handful, year by year, of students highly trained and qualified after long and expensive years of study.

Such an argument suggests that we are improvising a temporary Red Cross organization to deal with an acute situation which has suddenly developed and which will rapidly improve. If this were the case, there might be some justification for such an *ad hoc* policy. But that does not represent the state of the case at all. We are engaged in the tremendous task of assisting a great and ancient nation to work out a worthy system of medical education and practice. Amongst the leaders of that nation are already to be numbered an influential group of medical men and women who are fully conversant with the best science of the West, and who are eager to see similar standards adopted in their own country. One of them has already expressed himself publicly in the following words :—

> However necessary modern medicine may be to this country, I would rather see fewer well-qualified men and women with

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LL.D. (Hongkong)

PHYSICIAN EXTRAORDINARY TO THE PRESIDENT OF CHINA; DIRECTOR OF THE NORTH MANCHURIA PLAGUE PREVENTION SERVICE

(*See page* 110)

Mary Stone, M.D.
(Univ. Mich., U.S.A.)

FORMERLY PHYSICIAN IN CHARGE OF THE DANFORTH MEMORIAL HOSPITAL, KIUKIANG

(*See page* 111)

high ideals than a great many poorly-qualified practitioners with indifferent ambitions. For the one class makes for progress, whilst the other leads to stagnation, if not retrogression.[1]

In face of such an utterance as that, how could the representatives of missions possibly justify a policy which, in the West, would be stigmatized as nothing short of "flooding the country with quacks"?

It will no doubt be urged that partially trained men can do a great deal to relieve suffering, and that they can always keep in touch with an up-to-date and well-staffed hospital, to which they can send all their difficult cases. But the real fact is, as everybody knows, that the poorly-trained man is the last person in the world to admit that he has met a difficult case. He would lose face if he did so—or at least he thinks he would.

Furthermore one must remember that the analogy of India and Japan, where a double standard of qualified doctor and licensed medical assistant is frankly recognized, does not hold good in China, where there is no authority to control the activities of the partially trained Chinese doctor. If he is in practice by himself, there is therefore every likelihood of his professional standards gradually degenerating, thus bringing the mission which trained him into disrepute.

It is considerations such as these which have led

[1] Dr Wu Lien-teh, President of the National Medical Association of China, speaking in Canton, January 25th, 1917.

to the adoption by the China Medical Missionary Association of the highest scientific standards (comparable to the best hospital-schools of London, Edinburgh, or Baltimore) in those medical colleges whose diplomas they recognize. And this contribution to the life and ideals of the Chinese people represents an achievement of which the Association, and the Missions which called it into being, have every right to be proud.

Not only has this policy been followed in the general medical curriculum, but the Council on Medical Education has also taken the progressive step of outlining a two-year course of pre-medical study in the laboratory sciences, to be taken by students previous to entering upon their five years' medical training. This requirement is now enforced at the leading medical schools, and not only ensures a sound scientific foundation in the pre-medical subjects (chemistry, physics, and biology), but also allows for a re-arrangement of the medical curriculum by which the final year can be wholly devoted to clinical and pathological investigations.

This emphasis upon practical work in laboratory and ward is of special importance in China where centuries of memorizing, whilst they have produced a marvellous faculty of recollection, have also left an unhappy legacy of passive mental receptivity, to the discouragement of aggressive thought.

There is always a demand for the well-trained graduate. The Government, the railway companies, the national army and the progressive communities in the Treaty Ports vie with mission hospitals throughout the country for his services. And the demand will certainly increase faster than it can possibly be met. Thus there is becoming established in the mind of the Chinese people an appreciation of the trained and competent doctor with which neither quackery nor superstition will be able to compete.

To meet this growing demand not only is there a need for an increasing number of fully-qualified Chinese physicians, but it is essential that all medical science should be available in the language of the people. The China Medical Missionary Association has been fully alive to this fact. Special Publication and Terminology Committees have been at work for many years, translating several of the leading medical text-books,[1] and preparing a full vocabulary of scientific terms. Dr P. B. Cousland, of the English Presbyterian Mission, has been set aside for the direction of this work, whilst in recent years a strong Translation

[1] Amongst those already translated, or shortly to be published, are Gray's *Anatomy*, Halliburton's *Physiology*, Cunningham's *Practical Anatomy*, Lewis and Stöhr's *Histology*, Osler's *Medicine*, Rose and Carless's *Surgery*, Fuchs' *Ophthalmology*, Stengel's *Pathology*, Hiss and Zinsser's *Bacteriology*, Hare's *Therapeutics*, Hutchinson and Rainy's *Clinical Methods*, Holt's *Diseases of Childhood*, and many others.

Department has been organized in connection with the Tsinan Medical School, under the able leadership of Drs T. Gillison and P. L. McAll and their Chinese associates.

At first this important work had to be carried on without any certain guarantee that the scientific terms so created would be recognized by the Chinese Government. That stage has now happily passed. Within recent years the Central Education Board and other official bodies have appointed their own representatives to act with the Terminology Committee, thus giving an official imprimatur to their decisions. All medical terms are now being revised and added to by this joint body, the Chinese Government defraying the cost of publishing them and the China Medical Board also assisting most generously in this essential work of translation and publication.

It is impossible to conclude this chapter without referring to the encouraging attitude which the Chinese Government is beginning to adopt towards the development of medical education. This was clearly shown by the great step which was taken by the Board of the Interior in November 1913 in giving permission for human dissection and post-mortem examinations to be practised in medical schools, thus removing the last obstacle to the effective teaching of anatomy and physiology. More recently, at the Conference of the China Medical Missionary Association in 1920, a

representative of the Board of Education gave an important address, in which he outlined the policy of the Board as including the provision of a modern medical college in each province, the opening of an institute for research, and the registration of medical practitioners. One provincial governor—the progressive Governor of Shansi—has already commenced to erect buildings for a future school of medicine, and is now sending government students to Peking and Tsinan in the hope that they may ultimately form members of the teaching staff of the Shansi Medical College.

Other schools are gradually being opened by the central and provincial governments as funds permit, and there is every reason to expect that in course of time China will be covered by well-staffed and well-equipped institutions. It will probably take many years to reach that stage, and meanwhile medical men and women from Great Britain and from North America are counting it the highest privilege to be allowed to assist China in this tremendous task.

CHAPTER VI

THE ADVENT OF THE CHINESE NURSE

> So kind, so dutcous, diligent,
> So tender over his occasions, true,
> So feat, so nurse-like.
>
> SHAKESPEARE, *Cymbeline*.

THERE have been few events in China within recent years which have marked so fundamental a change of mental attitude on the part of the people as the fact that it has now been found possible, in many centres, to introduce into Chinese hospitals the practice of nursing on a modern basis. Such a possibility was practically undreamed of as recently as twenty years ago, except in a few of the more progressive treaty ports. To-day there is a flourishing Nurses' Association of China, with two hundred and thirty members (foreign and Chinese) working in all parts of the country, and over fifty Training Schools already registered in connection with it. To appreciate something of what this means to China, and the steps by which it has been brought about, we must remind ourselves of the conditions which existed in the hospitals in the old days, and the difficulties with which the pioneer nurses had to contend.

The old-time hospital, to which we have attempted to do justice in a previous chapter, was a sorry institution from a nurse's standpoint. It flagrantly broke every law of hygiene which it did not ignore. Nor could this well be avoided. The wards were not clean and tidy because the patient's friends were coming in and out all the time, bringing with them whatever sort of paraphernalia the invalid expressed a desire for. The beds were not made because the hospital did not possess any bedding. How can one "make" a bed which only consists of one enormous wadded quilt, wrapped around the patient? The sick man's body and clothes remained unwashed—at any rate in the colder parts of China—because there was neither a warm bath to offer him, nor clean garments to change into. The windows were kept tightly shut, as soon as the doctor had finished his round, because every patient was terribly afraid of a draught. As for anything so modern as dietetics, asepsis, or measures for the prevention of insect-borne disease, etc., such ideas but rarely intruded into the old-time ward. There were, of course, some notable cases in which doctors, by dint of remarkable organization and eternal vigilance, succeeded in keeping their hospitals both neat and clean; but these were the exceptions to the general rule.

Nor were these the only difficulties that confronted the pioneer nurse in China. A still greater

difficulty arose from the fact that she had to create her own traditions as she went along—and to do so in a country where the care of the sick was regarded as menial work, and beneath the attention of any of the educated classes. She had no great Florence Nightingale tradition in China to back her up and to win her a place in the community ; on the contrary, the first patients to whom she ministered regarded her frankly as a rather peculiar mixture of an unqualified doctor and a ward coolie. Moreover the patients' friends looked askance at a system which found no place for their attentions, and which relegated the whole care of the unfortunate invalid to someone who was neither a menial nor a relative !

I

The introduction of trained nurses into China is not so clearly marked an historical event as the coming of the first western physicians, but it would appear as if the honour of being the first graduate nurse to work in that country amongst Chinese patients belongs to Miss Elizabeth M. McKechnie (now Mrs Thomson). Miss McKechnie went to Shanghai in 1884 in connection with the Women's Union Missionary Society of America, and was attached for many years to the Margaret Williamson Hospital—an institution that will always be associated with the remarkable operative work of Dr Elizabeth Reifsnyder. Other nurses

gradually began to follow, the first to go out from Great Britain being Miss Frances Johnson, who was appointed in 1889 to Kienning, Fukien, under the Church of England Zenana Missionary Society. But it was not until after 1900 that their numbers began to increase with any rapidity. Since then each year has seen a marked advance, and there are now one hundred and ninety "foreign" missionary nurses in the country, in addition to a few others not connected with missionary institutions.

The pioneer nurse must have found it no easy task to decide just where to begin! With a hospital already established on primitive lines; with patients naturally suspicious of strange innovations; and with little or no facilities for up-to-date nursing work—the new enthusiast certainly had a difficult road to travel. But in almost every case she approached it with that cheerfulness and tact and patience which have been characteristic of the trained nurse all the world over.

The first step usually consisted in quietly replacing the patients' friends by a staff of ward attendants, who would act under the nurse's direction. In most places this could only be accomplished gradually, in order to avoid arousing the patients' fears; but as confidence became more and more established, even cases of a serious nature were willing to be left in the wards without

always having their friends by their side. There was an economic argument also which helped to bring about this change, for previously the patient had been under the necessity of providing food both for himself and his friend, whereas he soon found that under the new system he was just as well looked after without this double burden on his shoulders !

The great trouble, from the nurse's point of view, was that in those early days she could only secure the services of ward attendants drawn from a poorly-educated or illiterate class. The dignity of service for the sick and needy members of the community had not at that time penetrated deeply into the consciousness of the Chinese, and students had no incentive to take up as a profession a form of work which they considered quite derogatory to their rank. A large proportion of these early hospital orderlies were recruited from the poorer Christians, and many of them did most faithful work, according to their ability. But their lack of education made it impossible for them to grasp the scientific basis of modern nursing ; and in their anxiety to please the patients, and to keep everything peaceful in the wards, it is not surprising that they often failed to enforce medical instructions which seemed absurd and unnecessary both to them and to the patients. Why shouldn't the sick man get out of bed and walk about the ward, if he felt well

enough to do so? And why shouldn't he be allowed to take off the bandage and scratch his operation wound, when it was itching to distraction? And how ever was that poor typhoid patient to get well and strong if the nurse would not even give her a bowl of rice to eat, and she half crazy with hunger? It was amidst conundrums of this sort that the poor ward attendant had to pass his perplexed days, and little wonder if he often followed the line of least resistance.

Needless to say, this state of things did not satisfy the nurse fresh from a modern hospital. She quickly came to see—as missionary doctors had seen in another sphere—that one of the greatest responsibilities that was to devolve upon her must be along the lines of training up an educated Chinese nursing profession. Only so could China's immeasurable need be met; and if, in the training of such nurses, she could so influence those young lives as to win their full allegiance to the service of the Kingdom and permeate the new nursing profession with the highest ideals of Christian service, she might well feel that this was the greatest contribution which she could possibly make to the country of her adoption.

A start was made in this direction, in some of the Women's Hospitals, even before the arrival of trained nurses in China, notably by Dr Coombs in Peking, and by Dr Mary Fulton and Dr Mary

Niles in Canton. But nothing was attempted on any organized scale until the nurses themselves were in a position to take it up. Commencing with small groups, or possibly (as in the case of Mrs Stevens, the first L.M.S. nurse in Hongkong) with only a single schoolgirl, the training of the first Chinese nurses was of a more personal and practical nature than anything else. But gradually the work began to spread; and with the new ideals of social service which began to lay hold of the imagination of young China a few years ago, and, above all, with the new inspiration to work for Christ and for humanity which was everywhere taught in the mission schools, the opportunity of securing educated classes of probationers at last became a real possibility.

II

No one who has engaged in hospital work in China under both old and new conditions can ever forget those exciting days when the introduction of a regular nursing system into the wards was first attempted. Let me tell some personal experiences in the province of Shantung in illustration of this point.

Our first hospital in connection with the medical school in the city of Tsinan was run on very much the same primitive lines as those already described at the beginning of this chapter, and even when the first nurse was appointed to the hospital by

the Baptist Missionary Society, the absence of ward equipment and the lack of a trained staff made organized nursing work almost impossible. A start was made, however, first with hired orderlies, and then with two or three Christian girls from a neighbouring mission school, and meantime funds were being collected for the erection of a new hospital. It was decided from the outset that this should be built and furnished throughout on modern lines, so that it might not only offer the patients the best possible conditions but also afford the students an opportunity of learning how modern hospital treatment should be carried out.

There were, however, two great problems looming ahead, which were a continual cause for apprehension. In the first place, would the patients be willing to come into a hospital of this unfamiliar type, where their friends would no longer stay with them, where their diet would be strictly controlled by the medical and nursing staff, and where—most startling of all—they would receive a hot bath on admission, and be supplied with hospital clothing and bedding ?

Any doubts that ever existed on that score were dissipated almost as soon as the new wards were opened, for not only did the patients show the greatest willingness to accept the new conditions without a word of protest, but it soon became evident, from the increasing number of applicants,

that they fully appreciated the warmth and cleanliness and comfort of the wards. Although the capacity of the hospital had been greatly increased, it was not long before every bed was filled, and since then the only serious difficulty has been the utter inadequacy of the accommodation for the many needy patients who seek admission.

The other problem which faced us was an even more serious one. What was the use of fitting up a hospital on modern lines unless our English nurse could be given opportunity to train a staff to carry out her ideas throughout the whole institution ? If the hospital was to serve its purpose effectively, a full staff of trained nurses was at least as essential as a well-equipped building. But how was that staff to be produced ?

It was just as we were facing this situation that one of our Chinese colleagues suggested that the time had come when a challenge ought to be thrown out to Christian students in the best schools in China to come forward and study nursing as a life-work. He stated that there were already signs of a new attitude in the country (particularly in Christian circles) towards service of this kind, and urged that a notice be sent round to the mission schools, mentioning the conditions under which nursing is undertaken in the best hospitals in the West, and appealing for volunteers.

This suggestion was adopted, and an appeal

was sent out for twelve probationer nurses to form the first class in the new hospital—all of them to come on approximately the same conditions as to age, educational standard, remuneration, and length of service as at home. To our surprise and delight more than forty applications were received, almost all of them from old High school students in different parts of the province, and all of them members of the Christian Church.

In the fear lest some of these candidates did not understand what nursing really involved, and possibly regarded it as a short cut to becoming doctors, twelve of the number were picked out and given a month's hard probation in the wards, at the same time being informed that they would be required to promise, in their contract, that they would never call themselves physicians, nor act as such. It was anything but an easy month for them. It involved innumerable duties which they would naturally regard as unpleasant, or even repellent; it included the admitting and bathing of new patients, some of whom were distinctly reminiscent of that famous Afghan beggar who was soaked and scraped until the bath-attendant suddenly came down upon an old suit of clothes; and it meant strenuous work, by night and day, unrelieved by lectures or classes, such as the Chinese student takes delight in. But none of these things deterred them. Only one of the

twelve dropped out at the conclusion of the month, and the place was immediately filled.

Thus was founded the Nurses' Training School of the University Hospital, Tsinan. From that time onward there has never been a lack of applicants for the class of new probationers which is admitted yearly, and over forty Chinese nurses are now under instruction there.

What took place in Tsinan has taken place at the same time (or even before that time) in other centres also. The social conscience of the Chinese is being increasingly stirred, and every year sees new training schools for nurses established in connection with hospitals in different parts of the country.

The lot of the new probationer was by no means an easy one. The home influence was too often against her and she had to proceed in the face of severe opposition from her people, who knew nothing of nursing and naturally looked down upon a calling which appeared to them so menial. In the wards her position was even more subject to misunderstanding. The patients could not imagine who she was, nor why she was engaged in such work; to their minds her position was that of a ward coolie, and the more devotedly she served them the more they were inclined to treat her with contumely. How was she to establish her professional dignity or to maintain any discipline in the ward?

One of the first problems of training arose from the difficulty of securing good team work. It has often been remarked by writers upon China that, although the Chinese people have long ago advanced from sheer individualism, their community spirit has stopped short at the family or clan, with the result that anything approaching a civic consciousness, or a corporate national life, has been long in developing. But the young generation of China is undoubtedly learning its lesson, as the great political movement of the students at the time of the publication of the Peace Treaty amply proved. Nevertheless this lack of a corporate sense has been and remains an immense difficulty in the organization of such work as nursing, where a keen team spirit is essential. Day nurses will fail to report to night nurses and vice versa; whilst each probationer is inclined to regard her own scheduled duties, and nothing else, as her responsibility.

Another problem arises from a lack of appreciation of the need for exact work. There is a Chinese expression which is the bane of all scientific workers, and which expresses a rather common attitude towards many things. This is "ch'a-pu-to," which may be pronounced "charboodor," and translated "not far out." But the "not-far-out" attitude is, of course, fatal to good nursing, for it means that temperatures may not be exactly charted, medicines not carefully measured,

dressings not thoroughly sterilized, and a number of other things even more serious than that. The need for doing things quickly and punctually has also been difficult for Chinese probationers to appreciate. The common attitude is well characterized in the following "Limerick" from the *Nursing Mirror*:—

> There once was a bad little pro,
> Whose movements were terribly slow.
> When asked, could she hurry,
> She replied, "What's the flurry?
> I've four years to train in, you know."

Night work has all along been a difficulty, and this is not to be wondered at in a country where night duty is so little known. It was every bit as hard for some of those poor young Chinese nurses to keep awake at night as it was for them to sleep properly by day, and most hospitals have a sad record of dismissals on this account.

And yet, when all is said, it is astonishing what progress has been made in so short a time. The response of the Chinese nurses to good training has been remarkable, and the true nursing spirit is being more and more evinced every year.

The graduates of the Training Schools are rapidly winning a place for themselves among all sections of the community. There is an increasing demand for their services both in the homes of well-to-do patients and in hospital work, and all who have experienced their gentleness and skill are learning to appreciate their worth.

The Chinese nurse of the future will certainly be able to hold her own with nurses of any other nation, and there is every reason to believe that she will be able to offer her own unique contribution to the traditions of the world-wide nursing profession.

III

As the number of nurses increased in China it was felt that the example of the doctors in forming a Medical Association was one that was worth copying, and in 1909 the Nurses' Association of China came into being.[1] The object of the Association was twofold. First, it sought to establish the status of the nurse in China by enrolling under one organization all those who had received a full course of training, whether foreign or Chinese. Secondly, it sought to protect the standards of the new nursing profession which was being formed in the country, by standardizing the curricula and examinations and the minimum requirements of all training schools that desired to register themselves under its auspices and to secure its diplomas.

The success of the Association has been remarkable. Commencing with a small group in 1909, by 1920 it was possible to announce that one hundred and eighty-three foreign and forty-eight Chinese graduate nurses had already joined, that fifty-two training schools had been registered,

[1] See Appendix VI.

and that one hundred and fifty Chinese nurses had successfully passed the examinations and received the diploma of the Association. Nor is this all, for the Association has held regular conferences, at first annually and now biennially, which have attracted increasing attention throughout the country, and have brought the nurse's work before the notice of all sections of the community. At the Conference of the Association held in Peking in 1915, a special address was presented to His Excellency, President Yuan Shih-kai, of which the following is a brief extract:—

> The Nurses' Association of China is at present composed mainly of graduate nurses from Europe and America, who, in hospitals in the various provinces of China, are engaged in the training of nurses and midwives. Year by year the number of graduate Chinese nurses will increase, and they will gradually take up the leadership of the Association in China. The foreign members of the Association are but helping to lay the foundations upon which may be built the great nursing profession of China, the members of which shall come to be as much admired and respected by public sentiment as are the members of the profession in other lands.

In replying to this address, Admiral Ts'ai, who specially attended a session of the Conference as the representative of the President of the Republic, referred to the Nurses' Conference as "an epoch-making event in Peking," adding:—

> You medical men and women have broken down the bars to our sealed homes, and inspired our men and women to go forth and study likewise for your professions at home and abroad. The doctors shape the policies for the curing and prevention of disease, but it is the nurses who permanently

carry out such policies. I feel that I owe the life of my child to the faithful intelligent care given by a good nurse—to say nothing of the care I have received myself at the hands of nurses in time of need.

At another session of the Conference a most inspiring address was given by Surgeon-General Ch'uan, Head of the Army Medical College, Tientsin, who, in the course of his remarks, gave this interesting testimony :—

> There were those who said that the nursing profession could not grow in China ; but that day has passed. The nurse has proved her worth in this land, and has come to stay and to multiply. Keep your ideals high. A nurse worthy of the name must have education and refinement, and a character above reproach. Go forth with love, faith, and purity of heart ; your hope for the future is bright.[1]

Anyone who looks into the work of the Nurses' Association will agree that they certainly have "kept their ideals high," as Surgeon-General Ch'uan urged. They have set a high standard curriculum, demanding a full three-year course of training (or, in many instances, four years), followed by examinations in Anatomy and Physiology ; Materia Medica ; Medical and Children's Nursing ; Surgical Nursing ; Ophthalmic Nursing ; Obstetrics and Gynecology ; Dietetics ; Bacteriology and First-Aid ; in addition to practical examinations in Bandaging and Nursing Methods. At the same time the Association is doing its utmost to instil the highest ideals

[1] *Report of Conference of Nurses' Association of China*, 1915, pp. 13-15.

of nursing ethics throughout the profession, and to encourage Chinese nurses to regard their work as a true act of service to God and to their countrymen.

Another very important duty undertaken by the Association has been the preparation in Chinese of nursing handbooks and also a quarterly Nursing Journal. Several well-known text-books, such as Bundy's *Anatomy and Physiology*, Robb's *System of Nursing*, Russell Andrews' *Midwifery*, McIsaac's *Bacteriology*, etc., have already been translated, and others are in course of preparation.

IV

Chinese ideas on etiquette, particularly as regards the kind of work which it is considered proper for young women to engage in, have so far made it necessary for male nurses to be employed almost exclusively in men's hospitals, and in the male wards of a general hospital. How long this necessity will continue it is, of course, impossible to predict, but there are already signs of a changing sentiment in the more progressive cities. The fact that women nurses are used extensively in Japanese hospitals, and that the China Medical Board has decided to use only women nurses (and male orderlies) throughout their new hospital in Peking, is bound to exercise a considerable influence upon public opinion in China, and it is quite probable that the day will soon come when

it will be possible to employ female nurses in any of the hospitals in the larger cities.

Meanwhile it is encouraging to notice that well-educated male students are willing to take up the study of nursing—in fact some hospital matrons in China are inclined to think that they take it up even more seriously than the women nurses, regarding it more definitely as a life-work. A number of the hospitals in China are now training such men, who register under the Nurses' Association on exactly the same terms as the women, follow the same curriculum (with the substitution of Genito-Urinary Diseases for Obstetrics and Gynecology), and take the same examinations. In many general hospitals the male and female nurses take a large number of their classes together. It is significant of the growth of public opinion in China within recent years that such a thing is possible.

Male students who have concluded their course of training find no difficulty whatever in securing positions in which they can use the knowledge and experience that they have gained, either in other hospitals or as assistants to medical practitioners. Several such men went over to France in the recent war in connection with the Chinese Labour Corps.

Many of the mission hospitals which previously trained student-assistants are finding it much more satisfactory to train male nurses instead.

They can easily be taught to do all the routine work of the hospital; they follow the regular course of study prescribed by the Nurses' Association; and when they have completed their course they receive the recognized Nurses' Diploma, so that the hospital which trained them is free from any charge of deliberately turning loose on the public a number of unqualified medical practitioners.

An extremely important development which has taken place within recent years in several mission hospitals has been the training of midwives. One of the first hospitals to undertake this special work was the Alice Memorial Hospital, Hongkong. It is a fact of special interest that it was a Chinese gentleman who built that hospital in 1887, in memory of his wife, and other Chinese who subsequently added to it the Maternity Hospital. Since then similar work has been started in other centres—notably at Hangchow, in connection with Dr Duncan Main's extensive operations, and at Kiukiang, under the leadership of Dr Mary Stone.

Child-birth in China, as has already been remarked, is commonly attended by an intensity of suffering and a heavy mortality which words cannot describe, and which are unparalleled to-day in western countries. This is due to the deplorable ignorance and dangerous methods of the untrained Chinese midwife. A wonderful field

of service is therefore open in this direction. The graduates of the Maternity Training Schools are eagerly sought, and their opportunities are boundless.

It is a remarkable fact that at the present time the moulding of the new nursing profession in China is almost entirely in the hands of missionary nurses from Great Britain and North America, and of Christian Chinese who have received their nursing training abroad. This is a heavy responsibility, and at the same time an extraordinary opportunity. To shape the traditions of the Chinese nurse of the future, and thus to inspire the whole profession with the loftiest ideals, is a task worthy of the best nurses whom the homelands can produce. Those traditions will to a large extent be formed within the next ten or twenty years, by which time the Chinese nurses themselves will be the leaders of their profession. Until that time comes it is questionable whether there is any sphere in the nursing world which offers so unique an opportunity for the practice of the highest ideals and the exercise of the finest talents.

CHAPTER VII

RESEARCH AND PUBLIC HEALTH

To wrest from nature the secrets which have perplexed philosophers in all ages, to track to their sources the causes of disease, to correlate the vast stores of knowledge, that they may be quickly available for the prevention and cure of disease—these are our ambitions.—Sir William Osler, *The Vocation of Medicine and Nursing*, 1919.

Wherever western medicine spread in China—pioneered, as we have seen, by the missionary doctor—the possibility of advancing medical science and benefiting human sufferers by patient research and careful investigation was always before the minds of its most progressive leaders. Although the medical missionary does not go abroad with the primary purpose of scientific discovery, his sphere of service includes within its orbit everything that will help to throw new light upon the incidence and causation of disease, and will mitigate or prevent the sufferings of the people. Thus it is that the prosecution of medical research and the promulgation of public health measures are matters of vital concern to the true success of the medical missionary enterprise.

That remarkable trio, Colledge, Parker, and Bridgman, were fully alive to this fact from the outset, and in the first official pronouncement of

the objects of the Medical Missionary Society in China, issued in 1838, they referred to it in the following terms :—

> Countries are not more characterized by the form and nature of the soil and its productions, than they are by the prevalence of certain maladies and a partial or complete exemption from others. The contemplation of disease as influenced by the position and height of a country, its inland or maritime location, and the general habits of the people, conducts the student to a most engaging range of medical philosophy, while it discloses many important lessons to assist him in the way of benefiting his fellow creatures. The advantages derivable from such a contemplation have been acknowledged at all periods, and in all quarters. To secure these advantages it is required that a book should be kept in all the institutions connected with this Society, into which an entry will be made of all important cases, with a notice, not only of the disease and the treatment pursued, but also of the province, habits, and other circumstances bearing upon the history of each individual. . . .
>
> A knowledge of the language will open another door of enquiry, namely in relation to the substances used in Chinese pharmacy and to their peculiar modes of preparation. As the reciprocations of health and sickness are various in different countries, so Providence has displayed a corresponding variety in the distribution of remedies. This correspondence between the prevailing disorders of any country and the remedies which the hand of nature has provided is often very striking, and will become more so as the subject is investigated. We may therefore look for a great many valuable additions to our dispensatories, while an extended acquaintance with disease under new modifications will help to enlarge and complete our system of nosology.

Long before the China Medical Missionary Association came into existence in 1886, men were beginning to contribute original papers to the pages of the scientific journals. As early as 1842 William Lockhart published a "Treatise

on Chinese Midwifery" in the *Dublin Journal of Medical Science*, whilst ten years later Benjamin Hobson read before the China Branch of the Royal Asiatic Society an important paper on "Leprosy in China and the East."

I

There were many difficulties attending the pursuance of scientific research in China in those early days, chief amongst which was the superstitious fear which the Chinese cherished towards any interference with the cadaver, owing to their traditional attitude regarding the spirits of the departed. In spite of that fact, Parker performed his first post-mortem examination as long ago as 1849, whilst Dr James Henderson, in his report for 1862, not only referred to a number of similar autopsies in the London Mission Hospital, Shanghai, during the preceding year, but even stated that he had been able to give to Chinese practitioners in that city a series of demonstrations of surgical operations performed upon the dead body.

A second disability arose from the conditions under which medical work had to be carried on at first, owing both to lack of adequate staff and equipment, and also to the need for avoiding anything that might offend the susceptibilities of the people. It may be confidently stated that the largest sacrifice which the medical missionary

of former days had to face in undertaking work in the interior of China was the sacrifice of his scientific ambitions, and the lack of opportunity for professional consultation and co-operation. He found himself surrounded by a mass of fascinating problems to which he longed to devote time and thought, and by a wealth of clinical cases which he longed to investigate ; but how to carry out this desire, and at the same time do justice to the great objective which had brought him to China, was indeed a matter of serious difficulty. In most instances the doctor was the solitary administrator of a large and busy hospital, and in all probability the only medical adviser for a scattered community of missionaries and other European and American residents, in a vast district where communications were far from easy, and transport very slow. He had to carry the responsibility for the daily treatment of in-patients and out-patients, for the engaging and supervising of every member of the hospital staff, for the keeping of accounts, for the superintendence of the records of the institution, for the maintenance of the necessary stock of supplies, and for the conduct of all correspondence with home supporters. The organization and carrying out of the spiritual work of the hospital—possibly, also, of the local church or school—was upon his shoulders, and represented to him the most important work of his life. Often enough the

superintendence of building operations in the hospital and elsewhere, to say nothing of innumerable clerical duties and committees, put in a claim for the remnant of his time and strength. How then, in face of such endless duties, was he ever to find the necessary leisure and energy for scientific pursuits ?

It says much for the professional keenness of the medical force in China that, in spite of all these many difficulties, there have always been a number of physicians who have found means of maintaining the scientific side of their work, and the pages of the *China Medical Journal* during the last thirty-three years of its existence, as well as occasional articles in the *Journal of Tropical Medicine* and other medical periodicals, bear eloquent testimony to the valuable contributions which have been made in the past by such men and women.[1]

Recent years have witnessed a great advance along these lines. The biennial conferences of the China Medical Missionary Association, which at one time were largely devoted to the discussion of questions of general medical mission policy, are becoming increasingly valuable from the scientific aspect also. At the last conference [2] over one hundred original theses were sent in by members, with the result that simultaneous meetings of a technical character were held

[1] *Vide* list in Appendix I, page 209. [2] February 1920.

every afternoon throughout the conference. Four separate sections were formed, representing Anthropology, Medicine, Surgery, and Special Diseases. In each section important papers were read and helpful discussions took place. At the same conference an "Anatomical and Anthropological Society" was inaugurated, for the purpose of pursuing special investigation in that department.

Prior to that date, at a similar gathering of the Association, a special Research Committee had been appointed, with a view to stimulating scientific investigation and collecting reliable data. This Committee has issued a number of valuable reports from time to time, and has already made some important contributions to our knowledge of medical conditions in China, particularly in the department of helminthology. Two former members of that Committee, Dr W. H. Jefferys of Shanghai and Dr J. L. Maxwell (Jr.) of Formosa, prepared an excellent text-book on the diseases of China. It is full of most interesting information concerning the distribution of disease in the Far East, and was published in 1910 by a Philadelphia publisher.[1]

II

The main investigation that has so far been carried out in China has followed three distinct paths—historical, physiological, and clinical—and

[1] *Diseases of China*, by Jefferys and Maxwell.

it may be of interest to give some indication as to the lines upon which it has proceeded, or is proceeding to-day.

1. *Historical Investigation.*—From earliest days the exponents of western medicine in China have recognized that amidst much that is unscientific and unreliable in Chinese medical lore there must assuredly be a great deal of correct and useful observation, particularly as regards the course of various diseases, and the action of such medicaments as are in general use amongst Chinese practitioners. Unfortunately, as was pointed out in the opening chapter, the absence of a professional spirit amongst the doctors, or of any conception of co-operation with regard to medical knowledge, has prevented the publication of such discoveries, so that the task of the historical investigator is a very difficult one. But there is every reason to believe that a fund of interesting information, and possibly also the knowledge of new remedies for some complaints, awaits the patient search of the scientific student who has time and skill for the unravelling of the secrets of Chinese therapeusis.

Of those who have made the chief contributions to our knowledge of Chinese medicine the most noteworthy are the American missionary, Dr J. C. Thomson of Macao,[1] whose interesting writings

[1] Not to be confused with Dr J. C. Thomson of Edinburgh, who worked for many years in Hongkong.

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(*See page* 166)

have filled many pages of the *China Medical Journal*; Dr James Henderson of Shanghai, who crowded more useful activities into his brief five years of life in China than anyone before or since; and Dr John Dudgeon, the first Englishman to hold the position of Professor of Medicine in a Chinese College.[1]

Dr Henderson's paper on "The Medicine and Medical Practice of the Chinese," which was read before the North China Branch of the Royal Asiatic Society in 1864, and for which he was awarded the Fellowship of the Royal College of Surgeons, Edinburgh, is one of the most lucid contributions ever made to this subject.[2] Commencing with the beginnings of medical knowledge in all parts of the world, Henderson showed convincingly at what point China had missed the stream of progress, and gave a graphic description of anatomy and physiology as interpreted in Chinese medical literature. His article also included an extensive list of Chinese medical works, commencing with the earliest treatises, ascribed to the teachings of Shen-Nung and Hwang-Ti many centuries before Christ, and concluding with the famous "Yu-tswan-e-tsung-kin-kien," published in ninety volumes in the year 1740.

[1] This was the Tung Wen College, Peking, to which a scientific department was added in 1865, and of which Rev. W. A. P. Martin, LL.D., became President in 1869.

[2] *Proceedings, North China Branch, Royal Asiatic Society*, 1864.

Most of the books which Henderson mentions consist of dissertations by ancient physicians on every imaginable complaint and symptom; elaborate theories, mostly of a philosophical nature, as to their causation; and innumerable prescriptions for their relief. In addition to these, however, is the great Chinese Materia Medica (Pen-ts'ao-kang-muh), which was compiled by Li Shi-chen in the middle of the sixteenth century by command of the Emperor, and which contains some seventy volumes and eleven hundred illustrations. This interesting work, although over 300 years old, refers to a large number of drugs well known to practitioners of western medicine (such, for example, as sulphur, magnesia, calomel, aconite, etc.), and specially mentions one drug (probably hyoscyamus) as being of value as an analgesic for surgical operations.[1] The book also includes a vast number of substances which practitioners in the West have never learned to regard as of medical value. It classifies all drugs into the following varieties :—

[1] Wa-T'o, the father of Chinese surgery, who lived in the third century A.D., is said to have performed a large number of major operations, including laparotomies, upon patients who had been previously drugged with Cannabis Indica. He is also credited with the use of a special powder, which he applied to his operation wounds to prevent them suppurating! Unfortunately, this courageous adventurer came to an untimely end, for on advising a military officer, who had consulted him about severe headaches, to submit to a trephining operation, the latter promptly had him executed for making a suggestion tantamount to an attempt on his life!

Water, fire and earth.

Minerals.

Vegetables (herbs, grains, culinary herbs, fruits and trees).

Animal (insects, scaly animals, shelly animals, birds, hairy animals, human secretions, etc.).

Dr J. B. Neal of Shantung, now President of the Shantung Christian University, carried out a series of analyses in 1888 and the following years, with the aid of his assistants, and their results served to show which of the ordinary drugs procurable at the Chinese drug-shop were free from impurity, and what adulteration was present in those that were impure. A similar investigation, of great practical value, was made by Dr W. Wilson and Dr Douthwaite, who published methods for purifying and utilizing many of these drugs, thus effecting a large and most welcome saving in their hospital drug bills.

A very interesting and comprehensive list of Chinese medicines (including 1,575 varieties), prepared by Mr F. A. Morgan, was published by the Imperial Maritime Customs in 1889, whilst in 1911 Dr G. A. Stuart of Nanking brought out a valuable work entitled *Chinese Materia Medica: Vegetable Kingdom,* embodying the results of much careful research. The death of Dr Stuart unfortunately prevented the completion of his investigations into the other volumes of the Chinese Pharmacopœia. That great work has never yet

been translated into English, although Mr Daniel Hanbury and others have published very valuable notes upon it.[1] The subject of Chinese pharmacology thus remains practically virgin soil for the investigator, and a vast number of drugs referred to in Chinese medical books have never yet been identified or classified. Possibly some of the enterprising graduates of the newer medical schools in China will enter this fascinating field of research, and make discoveries which will lay the whole world under a debt of obligation to them.

2. *Anatomical and Physiological Investigation.*— In addition to the efforts of the newly formed Anatomical and Anthropological Society in China, which has already published an interesting series of papers as a supplement to the *China Medical Journal*, one of the chief tasks to which the Research Committee of the China Medical Missionary Association has addressed itself has been the collecting of accurate data, as to the physical conditions of the average Chinese, in comparison with Europeans and Americans of equal age.

This investigation, carried out especially by Dr Duncan Whyte of Swatow and Dr Arthur Shoemaker of Peking, has already established definite standards as to height, weight, chest

[1] Vide *Pharmaceutical Journal and Transactions*, July, August 1860; May, July, October, November, December 1861; February 1862.

measurement, urinanalysis, etc., which are essential to a correct appreciation of the effects of disease, or to any scientific determination of dosology for Chinese patients.[1] Similar statistics are also being gathered with regard to various anatomical measurements, etc.

In addition to these investigations a most important branch of research work has recently been commenced in the study of the food-value of the chief articles of Chinese diet. Physiological text-books dealing with the subject of Dietetics are necessarily founded upon a study of those substances which go to make up the ordinary western diet, and, for that reason, are of but little value in a country where the staple food differs widely from western standards. Of what advantage is it to the physician in China to be told the number of calories in half a pound of beef-steak when his patient's chief meal consists of two large bowls of rice, a little fresh vegetable, and some bean-curd? It is plain that this whole subject of Dietetics needs to be studied afresh in every country, if scientific deductions are to be drawn from it for use in disease.

One of the first papers published on this topic

[1] Amongst these standards are the following :—

Average height :—Adult male in North China, 5 ft. 7 in.
,, male in South China, 5 ft. 4 in.
,, female in South China, 4 ft. 11½ in.
Average weight of adult, 116 lbs.
Chest measurement of adult, 28 in. to 31 in.

was written in 1915 by Dr J. B. Neal,[1] and consisted of a series of studies carried out by himself and his students in the physiological laboratory of the Tsinan Medical School. A further investigation, dealing specifically with the analysis and food-value of Chinese bean-curd, was made in the same laboratory by Dr P. C. Kiang and Professor Adolph during 1919, whilst a similar research was conducted at the Peking Union Medical College by Professor Wilson and Miss Embrey. The results of these investigations were presented at the Medical Conference in 1920.[2] A start has thus been made, and the next few years will no doubt add fresh contributions to the knowledge of the subject, which will make it possible to deal scientifically with the vast range of digestive disorders which are met with amongst the Chinese.

3. *Clinical and Pathological Investigation.*—But the chief investigations which have so far been carried out have been in the clinical field and, more recently, in the fields of pathology and bacteriology, and in this respect China naturally offers an unrivalled opportunity for research. Numerous conditions are met with in that country which are seldom found in the West, and those complaints which are common to all lands are seen in an aggravated and unusual

[1] *China Medical Journal*, 1916, p. 9.
[2] Vide *China Medical Journal*, 1920, pp. 268, 503.

form in China, owing to long years of neglect, or to irritation from sepsis and other causes.

Space does not avail, nor would it be appropriate, to give any detailed list of the conditions which are commonly seen in China, but it may be stated that practically every ailment recognized by western physicians is to be found in the Far East, and a good many others besides—although a few diseases, such as appendicitis, acute rheumatism and lobar pneumonia, appear to be distinctly more rare in certain parts of China than in Europe. Tuberculosis, in all its forms, is every bit as rampant in China as in Europe, and it is a strange fact that while the Chinese patient has developed an excellent immunity from certain microbic infections—for example, from typhus or infection from ordinary cocci—he appears to have an extremely poor resistance to the tubercle bacillus. Venereal disease is also universally met with, too often accompanied by sepsis, and characterized by deep ulceration and necrosis. Tumours of every size, shape, and age are to be seen anywhere daily, while dyspeptic troubles of every description, malignant disease, rectal complaints, and ophthalmic conditions are all extremely common.

Of the conditions which are less frequently seen in western countries than in China mention must specially be made of intestinal parasites,

which formed the first subject of investigation conducted by the Research Committee of the China Medical Missionary Association. A large number of varieties of metazoal parasites are met with in China, particularly in the Yang-tse valley, and their distribution, symptomatology, etc., have been carefully worked out in recent years by medical missionaries in that area. In many cases this has meant considerable original research, particularly in regard to the recognition of metazoa, hitherto barely known in China (*e.g.* schistosomum japonicum, fasciolopsis buskii, etc.), and the result of this study has been of the greatest service in throwing light upon conditions not previously understood. These helminths are now shown to be responsible for a wide range of abdominal and blood diseases and obscure fevers, and in all the more up-to-date hospitals in China a routine fæcal examination is conducted upon every patient admitted to the wards.

Malaria, kala-azar, beri-beri, elephantiasis, leprosy, and a host of other tropical diseases are also very common, particularly in central and southern China, whilst the dysenteries, the typhoid and para-typhoid groups, cholera and other diseases of the intestinal tract, are met with in almost every part of the country.

In addition to the great researches of Sir Patrick Manson, much valuable work has already been done by medical missionaries and others in

investigating and describing some of these conditions. It is to the late Dr O. T. Logan of Changteh, Hunan, and to Dr F. W. Goddard of Shaoshing, that we owe much of our present knowledge of the distribution of intestinal parasites in China. It was Dr S. Cochran, of Hwai Yuan, who first discovered that the Leishman-Donovan bodies of kala-azar were present in the lymph-nodes of patients affected with that disease. It was Dr E. C. Peake of Tientsin who described the new blood parasite which appeared to be responsible for the condition of anæmia and dropsy from which many inhabitants of the flooded districts of Chihli suffered in 1918. It was Dr Duncan Whyte of Swatow who drew attention to the prevalence of thrombo-angiitis obliterans amongst Chinese patients. And many others might similarly be named. Interesting statistics have also been published in many of the hospital reports as to the incidence of disease in different parts of the country. In this connection reference must specially be made to the valuable information regarding vesical calculus in China which has been collected at the Canton Hospital, where over three thousand operations for that complaint have now been performed.

But when all has been said, it must be confessed that up to the present time only the fringe of clinical research in China has been touched. A large variety of fevers and other complaints

exist, the etiology of which is completely unknown, whilst innumerable other problems are awaiting investigation. With the better equipment which hospitals are now securing, particularly in the matter of laboratory apparatus, and with the larger staffs and the advent of keen Chinese graduates, this promising field of study can be attacked with new hope of success, and every year should see additional discovery to our general knowledge of Chinese medical conditions and their treatment.

III

Any attempt to deal with the problem of disease in China which left untouched the roots from which that disease has sprung would be simply futile. What hope can there be of ridding China of those parasitic affections which have just been referred to if we fail to deal with her soil-polluted water-supply and vegetation? How is China's "White Peril," the scourge of tuberculosis, to be combated, apart from a resolute campaign on behalf of good ventilation and sunshine and fresh air? How, indeed, is China ever to be saved from the devastating epidemics which continually decimate large sections of her population if her people are not instructed in the fundamental facts which govern infection, the knowledge of which has so effectively reduced mortality in the West?

But here we are met by the critic who seriously questions whether any steps which look to the lowering of China's death-rate will not really produce far more harm than good. "China is over-populated already," he argues, "and it is only these periodic famines and pestilences which enable her to persist at all. Remove these causes, and thus reduce her mortality, and she will either perish of insufficient food, or overrun the world."

Such a criticism counsels a sheer reversion to jungle law, and is as unsound as it is unchristian. The essential unity of the life of all nations, and the fact that East and West are bound together by common ties of interdependence, are axioms which every student of international affairs now accepts. Furthermore, if such a suggestion is to be seriously considered, it must frankly be recognized that it is double-edged; if applicable to China, it is still more applicable to our crowded little island in the West.

But to begin with, it is a question whether such a criticism is not based upon false premises altogether. It presupposes that the population of China is so appallingly dense that the land will not support more than it is supporting at present. Seeing that the density of China's population only averages one hundred per square mile; that she only ranks tenth among the chief nations of the world in this matter of density; and that even the most populous parts of the

country carry less people to the square mile than certain parts of Europe[1]—this suggestion is at least open to question.

Again, such a proposal is economically unsound, as was well brought out by the report of the China Medical Commission of the Rockefeller Foundation. "If a nation is healthy and energetic and efficient," that Report argued, "it will be able greatly to increase its productive power from an economic point of view."[2] It is not a strong, healthy, educated China that the world has to dread; it is an ignorant, unhealthy, impotent China that may well be a menace to civilization. It is of supreme importance to the world at large, as well as to China, that she should be healthy and strong, and able to make her own unique contribution towards the solution of the world's ills; and that is impossible whilst her progress is held up by the ravages of disease.

The action of the League of Nations at their first Assembly in voting a large sum of money with which to attack the problem of typhus in central Europe was not dictated by mere benevolence. It was sound economics, which recognized that it was unsafe to the rest of the world to allow so dangerous a plague-spot to be left unmolested. And the same is true of China.

[1] Quoted from statements by Dr W. W. Peter, and from *China—An Interpretation*, by Bishop J. W. Bashford.

[2] *Medicine in China*, p. 1.

Everyone has been so preoccupied with the horrors of the Great War during these last years that but few have had time to contemplate the magnitude of the disaster which was wrought throughout the world by the great influenza pandemic of 1918-19, which actually "destroyed more lives in the whole world than did the European war in five years."[1] And but few have appreciated the significance of the fact that that appalling disaster, which produced widespread havoc in North America, where it assumed a peculiarly virulent and fatal form, had traversed China before spreading across the Pacific. In this connection every student of bacteriology will remember the important scientific law which teaches us that the passage of any infective organism through a host of low resistance increases the virulence of the germ. In these days of shortened communications it is hardly a matter of unconcern, in face of the possibility of such world-wide epidemics, whether the health and resistance of China is normal or sub-normal.

But apart from all such questions, any thought of refusing to make China healthier and happier strikes at the root of every conception of Christian brotherhood. We must help her in her fight for health if we are pretending to be Christian at

[1] *Report of the Ministry of Health upon the Pandemic of Influenza*, p. 14.

all; and to do this successfully it is not enough to content ourselves with opening up hospitals for the reception of those already diseased; we must go deeper and try to assist her in the eradication of those very conditions which help to spread disease.[1]

For many years past the need of preventive medicine in China has been a matter upon which many medical missionaries have felt urgently, and wherever large epidemics have broken out—cholera, plague, etc.—these men and women have usually been foremost in their efforts to organize preventive measures. In the dread epidemic of pneumonic plague which broke out in Manchuria in 1911-12 a force of medical missionaries, assisted by students of the Peking Union Medical College, lent their services to Dr Wu Lien-teh and those associated with him in the Anti-Plague Bureau. It was then, as most readers will remember, that Arthur Jackson and two of the Peking students fell victims themselves to the terrible complaint, a fact that will ever be immortalized in China by the wonderful speech of the Viceroy of Manchuria at Arthur Jackson's funeral, and which concluded with these moving words :—

O spirit of Doctor Jackson, we pray you to intercede for the twenty millions of Manchuria, and to ask the Lord of Heaven

[1] The point at which China's population problem should first be approached is that of early marriage. The reform of marriage customs in China would bear alike upon the health and number of her people.

to take away this plague, so that we may lay our heads once more in peace upon our pillows. In life you were brave; now you are a spirit. Noble spirit, who gave up your life for us, help us still; look down with sympathy upon us all.[1]

The lessons that were learned from the experience of the first epidemic enabled medical missionaries to render still more effective aid during a second outbreak in 1917-18, and in Shansi, where most of these cases occurred, a most successful campaign was organized by Dr C. W. Young, under the patronage of the energetic "model" governor of the province, Governor Yen Hsi-shan.

Other steps have also been taken with the hope of impressing upon the Chinese the vital importance of public health work. At Shanghai a striking object-lesson has been provided by the organization of an excellent Municipal Health Department, under the able leadership of Dr Arthur Stanley.

Important contributions have also been made through the provision of popular literature and the formation of local health committees. The Christian Literature Society, the Commercial Press (a Chinese firm) and several other publishing houses have issued a number of popular books and pamphlets dealing with different phases of the question. The subject of hygiene is now taught throughout all the chief schools in China,

[1] *Arthur Jackson of Manchuria*, by A. J. Costain, p. 146.

where it is attracting increasing attention. In many of the larger centres—notably at Chuchow in connection with the work of Dr E. I. Osgood —special committees, usually formed of both Chinese and foreign members, have endeavoured to educate public opinion on the importance of sanitation and hygiene, and have initiated various efforts to improve the health of the city. At another city, Tsinan, an extensive and well-equipped Hygiene Section has been established in connection with the Museum and Institute which the Rev. J. S. Whitewright organized there in 1905, and which has already been visited by over four and a half million people. Charts, models, and diagrams illustrate to the visitor the chief causes for the spread of disease in China, whilst comparative tables of statistics demonstrate the enormous incidence of infectious disease and the high mortality which exist in China as compared with those countries which have adopted preventive methods. Possibly the most eloquent object-lesson of all, however, is the Chinese melon-seller who sits at the gate of the Institute, offering "hygienic melons" from a fly-screened stall to the people passing in and out!

But there have been two events within the past two years which have probably done more than anything else to focus the attention of the Chinese on this important question. The first

of these was the holding of an International Plague Conference in Moukden in connection with the plague outbreak of 1911-12. This important gathering, to which experts in public health from eleven different countries sent their representatives, was presided over by Dr Wu Lien-teh, and their recommendations were published in the leading papers.

The other event, and one which is having an increasing influence throughout the country, has been the setting aside, by the Lecture Department of the Y.M.C.A., of Dr W. W. Peter for the establishment of a special Health Division of that organization, and the subsequent action of the China Medical Missionary Association in appointing a Council on Public Health to co-operate with the National Medical Association and the Y.M.C.A. in the development of this special field of enterprise. The China Christian Educational Association and Y.W.C.A. have since joined in this effort, and the Council has now become known as the Council on Public Health Education. Dr Peter, with his able colleague, Dr S. M. Woo, are giving their whole time to this work, and their efforts have already met with striking success. A large number of attractive posters and pamphlets, illustrating simple laws of hygiene and disease-prevention, have been produced by the Council and circulated by the tens of thousands throughout China; unique Public Health Exhibitions of

a spectacular and impressive character have also been organized from time to time in the leading cities of China.

Dr Peter, who is an apt student of psychology as well as an adept in inventing popular devices for impressing facts upon an audience, has shown remarkable ingenuity in the planning of these exhibitions, and has succeeded in making Public Health a live topic throughout the whole city in which the campaign is being made. Long processions of sandwichmen, as well as strings of coolies transporting the thirty-eight case-loads of models and charts, serve as an excellent advertisement of the exhibitions, which are invariably attended by every class of the community, from the highest officials to the humblest schoolboy. A local "Health faculty," recruited at each centre and consisting of students from neighbouring colleges, explain the various exhibits, and all day long popular lectures are given to crowded audiences, illustrated by most ingenious mechanical models, as well as by stereopticon pictures and the cinema. By a skilful process of question and answer Dr Peter gets his audience to suggest the very questions which he wishes to impress upon them, as he discusses the relation of national health to national strength and influence, or reveals the fact that the death-rate of China is probably not less than 40 per 1000—the highest in any

civilized country in the world. He then shows, by comparative tables, the chief causes of this mortality, demonstrating at the same time that China is not so over-populated as the people usually suppose, and pointing out how immensely the prosperity and stability of the country would be increased if due attention were paid to the demands of national health.

Thus, by various means, an attack is being made on the outworks of this formidable citadel of Preventable Disease; and though these are but early days, the increasing interest which the Chinese themselves are taking in this subject holds promise of great progress in the future. The need and opportunity are alike urgent, and if only the officials of the country can be aroused to public-spirited action for the benefit of the community, much will be accomplished. Meanwhile, however, public opinion is growing, and there is every cause for hope.

CHAPTER VIII

THE OUTLOOK TO-DAY

Methinks I see in my mind a noble and puissant nation rousing herself like a strong man after sleep, and shaking her invincible locks; methinks I see her as an eagle, mewing her mighty youth, and kindling her undazzled eyes at the full mid-day beam.

MILTON, *Areopagitica.*

NEARLY a hundred years have passed since Thomas Colledge opened his first hospital in China. The time has come when we may ask ourselves what has been the harvest of these years.

Has modern medicine inspired a nobler conception than the practice of the old Chinese physician? Has it replaced conjecture and superstition with assured diagnosis and scientific truth? Is there promise of a high professional standard and a new ideal of service? Is there hope of advance and success in fighting the great battle for China's true health?

I

Before we attempt to estimate the effect which has been produced by the introduction of western medicine into China, we must first notice how

pitiably under-staffed the medical forces have been and still are, and how insignificant is the total work which has so far been accomplished when calculated in purely quantitative terms. Let us examine the case critically, and see if there is not justification for this sweeping assertion.

At the present time the total number of fully-qualified western-trained physicians practising amongst the Chinese probably does not exceed 1500—men and women.[1] Now let us suppose that each physician can, on an average, give adequate medical attendance to 2,000 people. This is probably an exaggerated estimate, for in Great Britain, with one physician to every 1,100 of the population, and with all those additional safeguards to health which preventive medicine, sanitation, and welfare movements have built up, the profession is far from being over-manned. But let us suppose that by energetic efforts our 1,500 fully-qualified physicians in China can do full justice to the physical needs of 2,000 people each—what, after all, does it amount to? It merely means that adequate medical care is provided for 3,000,000 people out of a population

[1] The number of western-trained doctors in China is often quoted as 2,000, but that figure would include a large number of students who have received practical training in mission hospitals, etc., but have never had the opportunity of taking the modern medical course, and who should not therefore be counted amongst the fully-qualified practitioners.

of approximately 360,000,000. In other words, there is no chance of the quackery of the unqualified being replaced by the competent medical treatment of fully-trained physicians until the number of qualified doctors in China is one hundred and twenty times as many as it is to-day.

A similar figure can be arrived at by a different method of estimating. Statistics which have been compiled in connection with the operation of the National Insurance Act in Great Britain demonstrate that about sixty per cent of insured persons require medical attendance each year, and that the average number of medical visits (either at the doctor's surgery or the patient's home) works out at about six per annum.[1] If such figures were applied to China it would mean that about 216,000,000 people would need to consult a physician each year, and that their total visits would amount to 1,296,000,000. But the total number of patients seen in all hospitals and dispensaries in China, or in the private consulting-rooms of western-trained Chinese physicians, probably does not exceed 1,800,000 per annum, whilst the total number of visits which they pay is less than 5,000,000.[2] This means

[1] From information supplied by the Ministry of Health. If the number of medical visits annually be calculated on the total number of insured, and not on the 60 per cent who require medical attendance in any year, the average works out at 3·6 per annum.

[2] Of these totals, the returns of mission hospitals show a little over 1,000,000 patients per annum, paying slightly less than 3,000,000 visits.

again that out of 120 sick persons who need competent medical help only one obtains it.

It may, of course, be argued that such a comparison loses sight of the fact that a large number of people in this country (especially those whose medical attendance is provided for by insurance) seek a doctor's advice for conditions which are quite trivial. On the other hand, in China there are a number of serious medical disorders which are not now seen in the West, thanks to the success of preventive medicine and sanitation. The incidence of disease is much greater there than it is in our own land, and, speaking generally, disease is apt to assume a much more serious form, and as a consequence the number of patients requiring medical help is very much larger. We are more than safe therefore in using these figures in comparison, and may assert that with all our medical missionaries and nurses from Europe and North America, and with our other western-trained physicians, it is doubtful whether we are yet touching more than 0·8 per cent of China's patients. In other words, 992 out of every 1,000 sick people in China still have no fully qualified medical help.

II

Whilst, however, it must be admitted, in face of such figures, that the practitioners of western medicine are still too few in number to make any

appreciable impression upon the total amount of sickness and suffering in China, there can be no question as to the far-reaching influence of their work, particularly among the progressive classes, and in the large cities and treaty ports.

In the first place, it is questionable whether there has been any other agency at work in China during this last century which has done so much to gain the confidence and goodwill of the people, and to dispel that miasma of fear and suspicion which beclouded all intercourse between East and West in former years.

It is startling to notice how great progress has been made in this direction. Only a few short years ago every political or social upheaval in China, every occasion of discontent and anxiety, was accompanied by an outburst of anti-foreign feeling, often culminating in riots and bloodshed. Did the heavens appear as brass and refuse to send the needed rain upon the parched crops? Then it was the foreigner whose presence was irritating the gods and producing the disaster. Did pestilence appear in the district and carry off hundreds of children whose parents lived in daily defiance of the laws of hygiene? It was the western barbarian who had bewitched them and who, under the cloak of religion and charity, was poisoning the wells and hatching nefarious schemes for their undoing. Did bandits roam the countryside, and unpaid

soldiers loot the helpless villagers ? There would never be peace so long as these strangers were permitted to live amongst them. And so on.

But what a contrast to-day, when political revolution is invariably accompanied by proclamations holding the life and property of the foreigner inviolate ; when the first act of the officials, at times of disorder, is to despatch troops to reassure and protect their western guests ; when good feeling and gratitude and appreciation are the commonly expressed sentiments of all classes towards the work of the foreign doctor. The hospitals' own work and influence have been the largest factor in bringing about the change. They have represented a new and tangible expression of brotherhood and sympathy which none could gainsay, even in times of misunderstanding and hostility. Thus they have won their way, not by the amount of suffering and sickness which they have relieved, but rather by the spirit which they have manifested.

In the second place, the mission hospital has been one of the most effective means of presenting and spreading Christianity in China. This it has done, not merely by dispelling misapprehension and producing a favourable atmosphere for the unprejudiced reception of the truth, but also by creating an ideal opportunity for the systematic teaching of the Christian message.

Many a patient who has entered a hospital ward with little or no interest beyond the immediate needs of his pain-racked body, has had his whole imagination fired by the story of the life of Jesus Christ that has been told him there; and many such have gone out of the hospital professed followers of Him, witnessing to His power in districts where formerly His name had never been heard.

Again, it may be confidently claimed that the practice of modern medicine, in the hands of men and women who have endeavoured to make their medical work a true expression of Christ and His teaching, has had a profound effect upon the attitude which the Chinese have themselves come to adopt towards the indigent and needy. A new sense of responsibility is being manifested in China to-day, especially by the younger and better-educated Chinese who have come under the influence of Christian teaching, and this expresses itself in an increasing effort to assist the poor and the suffering.

I well remember, on one occasion, being asked to address a large company of students in North China on the need for public health measures. I wanted to speak about community life and social service and such-like, but I found it most difficult to discover any adequate expression in the Chinese language with which to convey these ideas. That was less than ten years ago. To-day,

one can hardly pick up any Chinese newspaper —one certainly cannot pick up a student publication—without being confronted with these new terms on almost every page. A new social conscience has awakened. We see it in the birth of the nursing profession. We see it in the " model city " of Nantungchow, with its modern banks and mills, its refuges for the aged and afflicted, its blind and deaf asylums, its orphanage and its schools. We see it in the model prisons, now a feature of several of the chief cities of China. We see it in the free dispensary which is maintained by the boys of Nan Kai School, that great educational establishment at Tientsin under the able leadership of Mr Chang Po-ling. We see it in the Boys' Clubs ; in the night schools ; in the Y.M.C.A. work amongst the returned coolies from France ; and in the special investigation into the economic conditions of various classes of workers. As we watch these innovations in ancient China, we realize that a new force of enormous potentiality is at work to-day, and that it is the Christian leaders who are pioneering the reforms.

Before the Revolution of 1911 the work of the Red Cross, and the humane treatment of the wounded in battle, were almost unknown in China. To-day the Chinese Red Cross Society has its branches in every province, and its hospitals in numerous cities.

Another hopeful sign of the times is the way in which the Chinese people are extending financial support towards the hospitals and medical schools which have been organized in their country. Ever since the day when How Qua, the landlord of the building in which Parker had his first hospital, refused to accept any rent, the Chinese have repeatedly given proofs of their appreciation of such forms of medical charity, and of their willingness to share in the financial support of these institutions. Recent statistics have shown that over fifty per cent of the cost of upkeep of the mission hospitals in China to-day is borne by the Chinese themselves, and that no less than twenty-seven per cent of the hospitals are now entirely self-supporting, apart from the salaries of the foreign staff.[1]

Such financial assistance is not confined to private subscriptions and fees: for in many instances it is also derived from official sources. The most striking example of such co-operation is the agreement entered into by the officials of the Hunan Government and the Yale Mission in China for the establishment of the Hunan-Yale Medical College and Hospital at Changsha. The Hunan Government has undertaken to provide no less than $50,000 per annum towards the institution, in addition to large sums towards

[1] *An Enquiry into the Scientific Efficiency of Mission Hospitals in China*, pp. 33, 37.

the purchase of land and the erection of the initial buildings; and although constant revolution and military occupation have since impoverished the province to a pitiful extent, a most determined effort has been made to fulfil the compact.

Similar generosity has been shown in other cases. The officials and gentry in the city of Anking have for some years past contributed the sum of $3,000 per annum towards the support of the American (Protestant-Episcopal) Hospital in that centre, whilst within the last few months the provincial government of Shantung, at the instance of the Civil Governor, has passed a bill approving of an annual appropriation of $5,000 from the provincial budget towards the support of the University Hospital at Tsinan.

But the most encouraging feature of all has been the action which the Chinese have taken in many cities in establishing and supporting hospitals and dispensaries of their own. The Central and Isolation Hospitals at Peking, erected and maintained by the Chinese, and now under the able superintendence of Dr S. P. Chen (a graduate of Cambridge, and St Thomas's Hospital, London), are excellent examples of first-class institutions which we may confidently expect to see multiplied all over China. In other cities also, Government Hospitals are now beginning to spring up. Many of these, it is interesting to note, have both "Eastern" and

"Western" departments, patients being allowed to choose whether they will be treated by Chinese medicine or in accordance with western methods, in either case receiving medical treatment freely, or at very small cost.

These new Chinese hospitals are affording an excellent opportunity for co-operation on the part of medical missionaries and nurses, and in some of the larger cities local medical societies are now being organized for the purpose of providing a common ground on which the staffs of the Government and Mission Hospitals can meet for social intercourse and mutual consultation. At the same time applications are being received by the Nurses' Training Schools, which, as we have seen, are at present all connected with medical missions, for a supply of trained nurses for the new Government Hospitals.

It will thus be seen that while the quantitative side of the work which has so far been accomplished by the practitioners of western medicine in China has been very insignificant, the qualitative side of the enterprise has been extraordinarily impressive and effectual. This at once brings us face to face with the significant fact that it is not the amount of work done by the medical missionary of to-day which is the most important factor in his success; it is the kind of work he is able to perform which means everything. He cannot hope to do more than touch the barest

fringe of China's suffering and sickness. But where he does touch, he can see to it that his impress is true and vital, and that the tiny contribution which he is able to make is of such a quality as to reach to the very depths of China's physical and spiritual need, and to give her the very best that can be offered in the Name of Christ.

There was a time, not so many years ago, when the whole problem of world evangelization was worked out as a kind of mathematical problem, and many a fervid appeal has been made on the basis of the number of foreign missionaries who would be required to evangelize the whole of China in a given time.

But we are learning more and more in these days that the saving of the world is not a question of mathematical formulæ; it is a problem of spiritual agriculture: not the physical presentation of a certain dogma to the people of a country by a host of foreign agents, but the sowing of spiritual seeds which have the capacity of indigenous growth and of limitless reproduction. It is the quality of the seeds we plant that matters most.

Some years ago a kindly-disposed American missionary in the province of Shantung was greatly distressed at the poor character of the pea-nuts, from the cultivation of which thousands of the Chinese in that province eked out a precarious existence. On his next furlough he

spent a large amount of time consulting agricultural experts in his native country, and attempting to secure from them a better specimen of pea-nut for introduction into China. He had no means to set up every small farmer with nuts, but he could ensure that those which he introduced were the very finest that were grown in his own land. And to-day farmers all over that extensive province are under a deep obligation for his kindly thought and far-seeing effort.

Surely the same rule applies to the medical missionary enterprise. It is altogether beyond the power of missionary societies to cure all the ills of China, and probably God never intended that they should. In every country He is raising up people of the land to be His witnesses, and to do the great work of evangelizing and uplifting. But to us has been entrusted the inestimable privilege of setting some of these new forces into operation ; or, to change the metaphor, of sketching an outline which other and abler hands will fill in. How infinitely important then that we sketch it aright, a worthy image of Him whom we would represent to His children who at present do not know Him.

III

Let us now apply this principle and see where it leads us in the framing of a wise and long-sighted policy for the days ahead.

Once we believe that the physical and spiritual regeneration of China will, in the last analysis, be brought about by the Chinese themselves, everything that we have the privilege of doing will have to be scrutinized from the standpoint of its contribution towards that end. How far are we building for the future? And how far is the medical missionary work of to-day assisting the Christian forces of China in their immense task? These are the questions that we need most of all to ask ourselves.

Christian Chinese are already showing a remarkable capacity for leadership in every walk of life. In the political sphere, men like Mr C. T. Wang, one of the Chinese delegates to the Peace Conference, are making their influence felt throughout the whole country. In the educational world, Mr P. W. Kuo, Principal of the Government Teachers' Training College, Nanking, and Mr Chang Po-ling, Principal of Nan Kai School, are weaving the latest methods of education and school organization into the fabric of Chinese social life. In the army of that Eastern Republic, General Feng Yu-hsiang, the great Christian soldier, is showing an astonished world how clean a military camp can be. In industry, Mr Fong Sec, head of the Commercial Press, Mr C. C. Nieh, President of the Chinese Chamber of Commerce, and others like them, are applying the most modern and humanitarian methods to

the development of large commercial enterprises. In the Y.M.C.A. and Y.W.C.A., and in all sections of the Chinese Church, outstanding men and women such as Mr David Yui, Rev. C. Y. Cheng, Bishop Syng, Rev. Ding Li-mei, and Miss Dora Yu are showing remarkable gifts of Christian statecraft and spiritual leadership. And we who have had the privilege of sharing in the training of the new medical profession of China confidently believe that from the students who have passed through our hands there will emerge great surgeons, physicians, and investigators, who will contribute to the medical science of the world, bringing to their work those high ideals which they caught in the atmosphere of Christian schools and colleges.

It is to such men and women that we look to-day for the regeneration of China; and the medical missionary in that country can do nothing greater than assist in the training of such leaders, co-operating with them and helping forward their efforts. Such training, if it is really to count, must be the very best available; and such co-operation, if it is not to be misunderstood or resented, must be offered in the spirit of humility and true comradeship. The day is past when the missionary enterprise should revolve around the foreign missionary, to the practical exclusion or subordination of the Chinese worker. The Chinese Church and the trained Chinese Christian

must increasingly take the lead, and the missionary must lose no opportunity of establishing that leadership and making it effective.

This means that every missionary doctor, wherever situated, must endeavour to co-operate with the trained Chinese doctors of the district, and with all who are interested in promoting the health of the community. Every mission hospital should organize a Chinese Committee, the members of which should be encouraged to assume a growing share of responsibility in the administration and finance of the institution. This Committee might be advisory in capacity at the outset, but should as early as possible be entrusted with executive powers.

An increasing number of medical missionaries, both men and women, of the highest talents and richest experience, should devote themselves to the important task of medical education. Medical schools connected with missions, if they are to be continued, must be placed in a position to offer a thoroughly first-class course of training. In this connection we must remember China's urgent need of women doctors, and must make provision for the increasing number of Chinese women students who are now responding to that need. Hitherto British missions have taken little or no share in women's medical education in China, which has been almost entirely left to the American Women's Boards. This failure needs to be rectified.

But it is not the leaders alone—not even the progressive leaders of Young China—who can solve the gigantic problem of suffering and need which China still presents. The people themselves must see a new vision and assist in the enterprise, and the whole Chinese Christian Church, as Dr Fletcher Moorshead pointed out some years ago,[1] must awake to its responsibility in this direction. For this reason hospitals and refuges, dispensaries and public health centres, are required throughout the length and breadth of the country, and each one of them should be a model to the community around, and a means of raising the whole level of public opinion.

The medical mission should be a model of evangelistic effort, revealing to visitors and patients alike the great purpose for which it exists, and the great Personality whom it seeks to represent. It should be a model of sympathy and true charity, affording an object-lesson to the whole district in the considerate and kindly treatment which it extends to every class of patient who seeks its help. It should be a model of hygiene and sanitation, and thus be able to make a permanent contribution in teaching the people the principles by which disease can be prevented and suffering avoided. It should be a model of up-to-date investigation and treatment, and prepared to offer every patient who

[1] *The International Review of Missions*, April 1916, p. 277.

enters its doors the best that modern science has discovered. It should be an effectual training-ground for every assistant and employee who is engaged: a place where nurses and orderlies appreciate the responsibility of Christian service; where ward cleaners and operating-room attendants learn the importance of scrupulous cleanliness; where kitchen servants realize the risk to health and comfort which carelessness on their part may produce; where one and all are taught a new conception of their duty towards the sick and suffering around them. In a word, we are there to build a model of which neither we nor the Chinese need ever be ashamed, and one which we shall be proud to see them copying.

This objective can never be realized so long as the majority of our mission hospitals are as hopelessly under-staffed and ill-equipped as they are to-day. No hospital can rise to its evangelistic or scientific opportunities whilst it is run by a single doctor. An institution which possesses neither a bath nor an efficient microscope can hardly be thought of as a model hospital for the Chinese, still less a hospital which is unable to sterilize its ward dressings. Yet in such a condition of poverty are some of our medical missions in China to-day.[1]

[1] Sixteen hospitals in China reported in 1919 that they did not possess a bath; fourteen were without a bacteriological microscope; and thirty-six stated that they did not sterilize their ward dressings. (*An Enquiry into the Scientific Efficiency of Mission Hospitals in China.*)

The ideal which we have sketched by no means requires sumptuous buildings and luxurious fittings, nor anything approaching extravagance. The point to be aimed at is that each medical mission should be so furnished and administered as to be a true object-lesson to the particular community which it serves, in economy as well as in efficiency, in educative influence as well as in evangelistic zeal.

This policy demands a great variety of institutions of different grades, from the highly equipped Union Hospital, with its Medical College and Nurses' Training School, its many-sided staff, its elaborate apparatus and modern implements of investigation, down to the rough building in a western province, where, in his lime-washed theatre, the pioneer missionary needs surgical equipment, perfect of its sort, for his often difficult and always lonely work.

In a huge country like China, where conditions differ so widely in different provinces—or indeed in different parts of the same province—the equipping of mission hospitals needs to be suited to local circumstances. It would be unnecessary and wasteful to furnish a rural hospital on the same lines as would be required for a hospital in one of the large provincial capitals or treaty ports. On the other hand, it is inappropriate, and hardly worthy of missionary statesmanship, to build a hospital in one of those influential

and populous centres, and leave it with equipment that would barely suffice for a cottage hospital up-country.[1]

IV

It is not enough that these things should be understood in China. Their importance must be fully appreciated in Britain and in America also before ever they can become actualities out there. And that is why this book has been written. Four outstanding needs confront us :—

1. A deliberate far-sighted policy, which constantly takes stock of the whole medical missionary enterprise, must be maintained by the Boards at home as well as clamoured for by the men in the field. Such a policy must ever look to the devolution of medical responsibility on to Chinese shoulders, the education of all classes in the means for fighting disease and ignorance, and the impressing of the whole Chinese Church with its duty and privilege in

[1] A most interesting experiment, combining economy of administration with the conservation of the best hospital ideals, is now being attempted at Soochow by Drs Park and Snell in connection with the new hospital of the American (Southern) Methodist Mission. An excellent building is being erected for the accommodation of cases requiring skilled nursing and thorough investigation; and, in addition, a large "hostel" is being added, where patients not requiring such attention may be comfortably lodged and brought under the kindly influence of the institution during the time that they are convalescing from surgical operations, or attending the practice of the physician.

the care of the sick. It must keep careful watch upon the newer movements in China, readjusting itself continually to the requirements of a changing scene, and deliberately throwing on the scrap-heap such methods as no longer serve their end in the most effectual manner.

This will often entail the sacrifice of individual or denominational interests for the sake of the larger good, but if, in the process, such sacrifice brings about the uniting of Christian forces the increased efficiency and economy so secured will more than compensate for the loss. There is a failure somewhere in our Christian faith and practice—or at least in our missionary statesmanship—when two or more under-staffed mission hospitals exist separately in the same city, each unable to do thoroughly effective work. And such an example cannot but weaken our witness to the love of God and the unity of our faith, as well as proving a serious detriment to medical progress and efficiency.

There are still some cities in China where such a state of things exists. But there are others in which the medical missionary efforts of different Societies have been united with striking success, as, for example, in the University Hospital at Nanking, the Union Hospital at Huchowfu, etc. Where formerly there were three hospitals in Nanking, each belonging to a different mission, and each under-manned and ill-equipped, one

excellent union institution is now in existence in which all these missions co-operate, and in the conduct of which each doctor is able to develop his own special department.

These great union medical schemes have a value that is far greater than the sum of the efficiency of the several units. They stand not only for a wealth of medical experience and knowledge, but for a united presentation of that which is the heart and the common ground of Christian truth.

2. A sustained attempt must be made to secure the services of trained Chinese physicians in all our hospitals and other branches of medical missionary work, and to accord them positions of full responsibility and trust. There is no student of the missionary enterprise who will not agree with this in theory, but so far as we have gone at present, it would be ridiculous to pretend that the policy of missions towards promoting the full development of Chinese leadership and initiative is carried out at the expense of the foreign missionary and his ideas. There are but few Mission Boards which are yet prepared to subsidize Chinese work without demanding control. Many missions have not even appointed a qualified Chinese doctor on their hospital staff, much less entrusted the lives of their representatives to his care—whilst in many other centres the Chinese doctor is regarded merely

as the employee of the mission, or designated an "assistant" at best.

Chinese physicians or surgeons who have taken the full medical course in a modern medical school, and are elected to positions in our mission hospitals, must be given exactly the same status as their European or American confrères, and regarded as true colleagues and fellow-members of the great medical fraternity. The most efficient of them must be promoted to administrative posts, where their responsibility will be as great and as independent as the foreign members of the staff, and where they will be given equal opportunity to try out their ideas and make their own mistakes.

Where this is done, and where the hospital is so equipped as to offer them proper facilities for their medical work, there is every reason to hope that their services may be secured. Of 115 men who completed their medical training between the years 1906 and 1919 at the Union Medical College, Hankow, the Medical Department of the University of Nanking, or at the Tsinan Medical College, no less than 110 have served for longer or shorter periods in mission hospitals, and the great majority are still doing so—and that in spite of the fact that only a comparatively small percentage of them were under any obligation to return to such work.

3. The work that still waits to be done in China urgently demands a large increase of medical men and women from the home countries. They are needed for pioneer work; for medical education; for public health developments; and, most of all, for the staffing of the existing hospitals, eighty per cent of which were only able to report the presence of a single missionary doctor each during the year 1919.

This kind of work calls pre-eminently for the Honours men and women of our medical schools. It requires a professional experience and keenness which are able to take full advantage of the enormous field of clinical research which China presents, and to make a thoughtful contribution towards the solution of some of her innumerable problems. But most of all it requires a depth of culture and refinement, and a solidarity of Christian character, which can regard with sympathy a point of view often far removed from its own, and can display humility and self-effacement even when circumstances are most trying.

If China did not also offer a sphere of useful service for the man of humble attainments, many of us would soon go home. But in the vastness of her need there is room for every well-qualified medical practitioner who is prepared to devote himself to the redemption of her people and the relief of her distress, and who is sufficiently

young and elastic to adapt himself to an entirely new environment.

> God give us men! A time like this demands
> Strong minds, great hearts, true faith and ready hands.

Surely it is high time that the professors of our home medical colleges should bear in mind the vast needs of Asia, and should constantly present the facts of the situation to their classes. Cannot we appeal to them to lay before their most promising students, year by year, the great adventure of science and of service to which the pathetic cry of the suffering millions of China is summoning men and women? And furthermore, is it unreasonable to ask that more direct lines of communication be established between the profession at home and its members in distant outposts? Why should not some of the leading physicians and surgeons of London and New York come and visit our hospitals in China—not as globe-trotters, but staying long enough to acquaint themselves with the conditions of medical life and practice out here—and give us the opportunity of sharing in their experience and skill? Better facilities should at the same time be provided in the laboratories and wards of the large hospitals of the West, so that medical men from China on furlough, or Chinese medical graduates proceeding to Europe

or America for post-graduate study, should have full opportunity of being brought into touch with the latest methods of investigation and treatment, and of securing expert advice and assistance in attacking the unsolved medical problems of the Far East.[1]

4. This great and beneficent service for China can never be satisfactorily accomplished until Christian people in the homelands recapture the spirit of the men who founded and endowed our own great institutions of healing—such as Rahere and Thomas Guy and others like them—and are prepared to employ a similar munificence on behalf of the East. Numbers of our mission hospitals and medical schools here in China are suffering to-day from impaired efficiency and retarded progress on account of inadequate financial support. The furlough of the missionary doctor, which should be largely devoted to the replenishing of his professional and spiritual resources, is too often taken up with the effort to secure funds for the maintenance of beds and cots in his wards or the completion of his hospital buildings. This should no longer be, now that we have reached a day when the unity of the world and the brotherhood of its people are

[1] The China Medical Board has already generously awarded a large number of fellowships to medical missionaries on furlough and Chinese medical graduates, to enable them to pursue post-graduate study in North America or Great Britain.

subjects which constantly occupy our thoughts and our conversation.

China is no longer an alien land. She has become our neighbour, our fellow-counsellor around the Table of Versailles, a member with us in the Council of the League of Nations. And if she suffers, we too must suffer with her.

If this battle for the redemption of China is worth our fighting, it is worth our sacrifice also. Such sacrifice has already been given by many humble followers of the Christ, who gladly lived upon small incomes voluntarily reduced, in order that China might share the richest blessings they possessed.

> The healing of the world
> Is in its nameless saints.
> Each separate star is nothing;
> A myriad scattered stars
> Break up the night,
> And make it beautiful.

And after all is not this the fundamental philosophy of the Christian life, that the seed should die in order that it might bring forth fruit? That was what the Cross of the Son of God meant. And after the Cross came the Resurrection.

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The Health of Missionary Families in China. W. G. Lennox, M.D. China Medical Journal. 1921.

VI PERIODICALS

China Medical Journal. Published monthly by China Medical Missionary Association, 5 Quinsan Gardens, Shanghai. Recent copies can be seen at the Library of British Medical Association, Strand, and a complete file at the Missionary Research Library, New York. Old volumes may be consulted in the British Museum Reading Room.

Medical Missions at Home and Abroad. Published monthly by London Medical Missionary Association, 49 Highbury Park, N.5. Price 1d.

Quarterly Paper. Published by Edinburgh Medical Missionary Association, George Square, Edinburgh.

Nurses Near and Far. Published quarterly by Nurses' Missionary League (Miss H. Y. Richardson, Secretary, 52 Lower Sloane Street, S.W.1). Price 3d.

Mercy and Truth. Published monthly by Church Missionary Society. Price 2d.

II INFORMATION REGARDING MEDICAL MISSIONARY SERVICE IN CHINA

1. VOCATION. A strong sense of vocation, and an impelling desire to undertake such work as a definite service for God and for humanity, are the first essentials of the medical missionary enterprise. This enterprise has no financial inducements to offer; on the contrary, it makes constant demands for the exercise of faith and self-denial. For that reason it is not to be lightly entered upon. But the man or woman who engages in it as a result of clear conviction and Christian experience will find that it possesses compensations which more than suffice.

2. PROFESSIONAL TRAINING. Students who are looking forward to this service are required in the first place to obtain a recognized medical qualification. In view of the demands that will be made upon their professional ability, and of the probability that they may often be deprived of the opportunity of medical consultation, it is recommended that this initial training should be as thorough and complete as possible, students taking a University degree, wherever practicable, in preference to a College diploma.

3. FINANCIAL ASSISTANCE DURING TRAINING. In addition to the open scholarships and bursaries offered at the various medical schools in the home lands, other opportunities of securing financial assistance towards the heavy cost of medical training are occasionally afforded to students who purpose to become medical missionaries. The London and Edinburgh Medical Associations each maintain hostels for such students and make annual grants towards part of their expenses; whilst the Society for the Promotion of Christian Knowledge also offers a small bursary for medical students who intend to work in connection with the Church of England.[1]

4. POST-GRADUATE WORK. It is of the utmost importance that students should obtain suitable post-graduate experience before proceeding abroad. Medical missionary work is to be regarded as a life-service, and for that reason the urgency of the need abroad should never be allowed to obscure the importance of thorough preparation. Unless exceptional

[1] Full particulars can be obtained from Dr H. Melville Churchill, London Medical Missionary Association, 51 Highbury Park, London N.5; Dr H. F. Lechmere Taylor, Edinburgh Medical Missionary Association, 56 George Square, Edinburgh; or the Secretary, S.P.C.K., 6 St Martin's Place, London W.C.2.

circumstances (*e.g.* the student's age) make it impossible, a minimum of two years should be devoted to post-graduate work, one at least being spent in resident appointments, and the remainder in such study as will be most suitable for the particular kind of work that is in contemplation.

5. Varieties of medical work, and special preparation. Broadly speaking, medical missions in China may be divided into three classes :—

(*a*) *The pioneer station, or up-country hospital.* This represents the type of work in which most medical missionaries are engaged, and is largely surgical in character. A resident appointment as House Surgeon is therefore an invaluable preparation, whilst special experience in ophthalmology, in tropical diseases (especially helminthology), in hospital administration (such as is given in connection with the D.P.H. course), and in midwifery (particularly cases of obstructed labour), is exceedingly useful. The doctor in charge of such a hospital is responsible for all pathological work, and also for the administration of the institution ; a knowledge of laboratory technique and of account-keeping is therefore of great service.

(*b*) *The base hospital in the large treaty ports, etc.* This work is offering an increasing opportunity for specialization, particularly when such hospital is operated on a " union " basis. Students destined for this type of medical mission work should direct their post-graduate training accordingly, and, in addition to experience in general medicine or surgery, should prepare themselves in one or other of the specialities (not forgetting Radiology).

(*c*) *The medical college.* The work of medical education in China to-day demands the same specialization and the same expert training as is needed for similar posts in the home country, together with some experience if possible as a demonstrator or teacher, and an aptitude for original work.

6. Theological training. Medical missionaries are not advised to attempt to add the study of theology to the long medical curriculum, but an adequate course of study in Biblical Exegesis, Christian Apologetics and Comparative Religion, if procurable, will greatly enhance their usefulness as members of the missionary force. Experience in Christian service is also an invaluable and necessary preparation.

7. Language study. A medical missionary's hope of getting into close touch with his patients and helpers depends upon his free use of their language, and it is strongly advised that the first two years of residence in China should be kept free from medical responsibility and devoted to language study. Such a course does not prevent a man from keeping up some professional work, provided it does not involve any encroaching upon the time allotted to the study of Chinese.

8. Medical service apart from missions. China does not yet present many opportunities for medical work on behalf of the Chinese people apart from missionary service, though a few practitioners at the large ports, who are familiar with the Chinese language, include a number of Chinese patients in their clientele. As familiarity with western medicine spreads, and Chinese medical schools and hospitals increase, it is possible that new openings will occur for the service of European or American physicians who have no connection with missionary societies.

9. Information. Intending medical missionaries are recommended to get into early communication with the Secretaries of the particular Mission or other organization under which they contemplate working. Information regarding medical work in any part of China, or concerning the various vacancies requiring reinforcements, can always be obtained on application to the Secretary of the Advisory Board of Medical Missions, Edinburgh House, 2 Eaton Gate, London S.W.1, who will also supply details regarding conditions of service, furloughs, etc.

Information concerning medical education can be obtained from the following addresses :—

Peking Union Medical College
China Medical Board, 61 Broadway, New York, U.S.A.; or c/o London Missionary Society, 48 Broadway, London, S.W.1.

Shantung Christian University, Tsinan
19 Furnival Street, London, E.C. 4; and 156 Fifth Avenue, New York, U.S.A.

Moukden Medical College
121 George Street, Edinburgh.

West China Union University, Chengtu
Methodist Foreign Mission Board, 150 Fifth Avenue, New York; or Canadian Methodist Mission, 299 Queen Street West, Toronto; or c/o Friends' Foreign Mission Association, 15 Devonshire Street, Bishopsgate, London, E.C.2.

Hunan-Yale Medical College, Changsha
5 White Hall, Yale Station, New Haven, Conn., U.S.A.; or c/o Wesleyan Mission House, 24 Bishopsgate, London, E.C.2.

St John's University, Shanghai
281 Fourth Avenue, New York, U.S.A.

Canton Christian College
156 Fifth Avenue, New York, U.S.A.; or c/o London Missionary Society, 48 Broadway, London, S.W.1.

N. China Union Women's Medical College, Peking
Room 710, 150 Fifth Avenue, New York, U.S.A.

Hackett Medical College for Women, Canton
Presbyterian Woman's Board, 156 Fifth Avenue, New York, U.S.A.

III CHINA MEDICAL MISSIONARY ASSOCIATION

The China Medical Missionary Association was founded in 1886, and includes within its membership all physicians resident in China who are engaged in, or in sympathy with, the work of medical missions.

The *Headquarters of the Association* are situated at 5 Quinsan Gardens, Shanghai, the Executive Secretary being Dr R. C. Beebe, formerly of Nanking.

The *Policy of the Association* is well expressed in the following Resolutions, adopted at the triennial Conference held in Peking in January 1913 :—

1. That in establishing medical colleges and hospitals our sole object is to bring the blessings of healing to the souls and bodies of the people of China, and to give a thorough training in medicine and surgery to young men and women of education and intelligence, enabling them, as fully qualified doctors, to be of the highest service to their country.
2. That we have no desire to create permanently foreign institutions, and that our aim and hope is that these medical colleges will gradually and ultimately be staffed, financed and controlled by the Chinese themselves.
3. That we are desirous of bringing our teaching work into line with the regulations of the Ministry of Education, and in all ways to co-operate with and assist the Government of the Republic in medical education, so that a strong and thoroughly equipped medical profession may be established in this great land.

The *Operations of the Association* include the following :—

1. The publication of the *China Medical Journal*.
2. The holding of periodical medical conferences. (These are at present held biennially.)
3. The maintenance of the following special Councils and Committees :—
   - Council on Medical Education.
   - Council on Publication and Translation.
   - Council on Public Health Education.
   - Committee on Medical Research.
   - Committee on Hospital Administration.

IV NATIONAL MEDICAL ASSOCIATION OF CHINA

The National Medical Association of China was formed in 1915, with Dr F. C. Yen of Harvard as first President. Its membership in 1920 was 450—men and women.

The *Objects of the Association* are as follows :—

1. To promote goodwill and union among Chinese practitioners of western medicine.
2. To maintain the honour and the interests of the medical profession.
3. To expedite the spread of modern medical science in China, and to arouse interest in public health and preventive medicine among the people.
4. To co-ordinate, and co-operate with, the existing medical forces in China, Chinese and foreign, in the working out of the above objects.

Membership of the Association is divided into the following three classes :—

1. Regular members—who must be graduates in medicine of foreign universities or colleges, or of recognized medical colleges in China, and who must be acquainted with at least one western language.
2. Associated members—graduates of medical colleges in China, who do not possess an acquaintance with any western language.
3. Honorary members—medical men and women of any nationality, who have rendered some signal service to China, and are elected by a special vote of the Association.

The National Medical Association meets biennially, at the same time as the China Medical Missionary Association, some sessions of the two Associations being held jointly. It also publishes a quarterly medical journal, which is printed both in Chinese and English. The Central Office of the Association is situated at 34 Nanking Road, Shanghai, the English Secretary being Dr W. S. New.

V MEDICAL CURRICULUM IN CHINA

The following course of study, extracted from the requirements of the Premedical and Medical Departments of the Shantung Christian University, may be regarded as typical of what is followed at the more modern medical schools recently established in China by British and American organizations. The curriculum of the Chinese Medical Schools is somewhat more restricted at present, and has no separate premedical course.

Premedical Course

First Year—

Inorganic Chemistry (lectures and laboratory), 6 hours per week
General Physics (lectures and laboratory), 5 hours per week
Elementary Botany and Zoology (laboratory), 7 hours per week
Chinese Literature and Essays, 4 hours per week
English, 4 hours per week
Psychology, 2 hours per week
Mathematics, 1 hour per week for six months

Second Year—

Chemistry—Qualitative Analysis and Organic Chemistry (laboratory courses), 9 hours per week
Physics (Mechanics, Electricity, Heat and Light), 4 hours per week
Advanced Zoology (laboratory), 8 hours per week
Chinese Literature and Essays, 4 hours per week
English, 4 hours per week

Medical Course

First Year—

Anatomy (including dissection of whole body), 16 hours per week
Histology, 9 hours per week
Embryology, 9 hours per week for 8 weeks
Physiological Chemistry, 12 hours per week for second half-year (laboratory course)
English, 5 hours per week

Second Year—

Applied Anatomy, 3 hours per week for first half-year
Physiology (experimental), 11 hours per week
Materia Medica, Pharmacy, and Pharmacology, 8 hours per week

Bacteriology and Serology, 9 hours per week for first half-year
Pathology (laboratory course), 11 hours per week (six months)
English, 5 hours per week

Third Year —

Pathology (continued), 11 hours per week for 3 weeks
Medicine (lectures and demonstrations), 5 hours per week
Surgery (lectures and demonstrations), 5 hours per week
Therapeutics, 4 hours per week for first half-year
Physical Diagnosis, 4 hours per week for first half-year
Laboratory Diagnosis and Parasitology, 6 hours per week
Clinical Medicine and Surgery (out-patient practice), 13 hours per week for second half-year
Obstetrics, 3 hours per week for second half-year
English, 4 hours per week

Fourth Year—

Medicine, 4 hours per week
Surgery, 5 hours per week
Obstetrics, 3 hours per week for first half-year
Ophthalmology, 4 hours per week
Dermatology and Syphilology, 2 hours per week
Pediatrics, 3 hours per week for second half-year
Clinical Medicine, Surgery and Specialities (wards and out-patient departments), 12 hours per week
English, 4 hours per week

Fifth Year—

Clinical Medicine, Surgery and Specialities (class divided into three groups, rotating through year, and being responsible for all clinical and pathological investigations on patients), 18 hours per week
Advanced Pathology, 4 hours per week for first half-year
Surgical Pathology, 4 hours per week for second half-year
Preventive Medicine, 2 hours per week
Nervous and Mental Diseases, 1 hour per week
Gynecology, 1 hour per week
Operative Surgery, 2 hours per week for first half-year
Anæsthetics, 1 hour per week for second half-year, in addition to practical experience
Diseases of Ear, Nose and Throat, 1 hour per week
Radiology, 1 hour per week
Medical Jurisprudence, 1 hour per week for 2 months

VI NURSES' ASSOCIATION OF CHINA

The Nurses' Association of China was founded in 1909, and at its last conference, held in Shanghai in 1920, was able to report a total membership of 183 foreign and 48 Chinese nurses.

The *Objects of the Association* are as follows :—

1. To promote fellowship amongst its members ; to advance the interests of the nurse's calling ; and to afford mutual help and comfort in times of illness, discouragement or misfortune.
2. To raise the standard of hospital training in China by the adoption of a uniform course of study and uniform examinations for Chinese nurses.

The *Operations of the Association* include the following :—

1. The publication of a quarterly Chinese journal for nurses.
2. The translation and publication of nursing text-books.
3. The registration of such nurses' training schools as can meet the requirements of the Association as regards moral standard, hospital discipline and intellectual training of their nurses, and are prepared to adopt the uniform course of study and examinations as prescribed by the Association.
4. The conducting of all nurses' examinations at the termination of their course of training, and the issuing of the diploma of the Association to such candidates as secure not less than 60 per cent marks in each paper. (An honours certificate is granted to candidates securing 80 per cent.)
5. The holding of periodical nurses' conferences.

The *Course of Study* at registered training schools covers a period of at least three years, and includes the following subjects :—

First Year—

Elementary Anatomy and Physiology ; Hygiene and Elementary Bacteriology ; Chinese Dietetics ; Bandaging ; Materia Medica ; Toxicology ; and general nursing principles.

Second Year—

Medical nursing, with diseases of circulatory, respiratory, digestive and urinary systems ; Fevers ; Surgical nursing, including fractures, burns, septic conditions, hæmorrhage, preparation and care of operating theatre, sterilization, care of instruments, etc. ; Nursing of children, medical and surgical.

Third Year—

Ophthalmic nursing ; Gynecological and obstetric nursing (for women nurses) ; Genito-urinary nursing (for men nurses) ; Ambulance and first aid.

The *Examinations of the Association* are confined to such candidates as possess certificates from their training schools, guaranteeing that they have been under training for at least three years, have regularly attended classes for instruction, and have already given complete satisfaction in their ward work and general conduct. Papers are set in the following subjects :—

1. Anatomy and Physiology
2. Medical Nursing and Children's Diseases
3. Surgical Nursing and Bacteriology
4. Materia Medica
5. Dietetics
6. Ophthalmic Nursing
7. Genito-Urinary Nursing and First Aid (men only), or Obstetrics and Gynecology (women only)

Full information regarding the Association or concerning nursing work in China can be obtained from the Hon. Secretary, Miss Batty, China Inland Mission, Shanghai.

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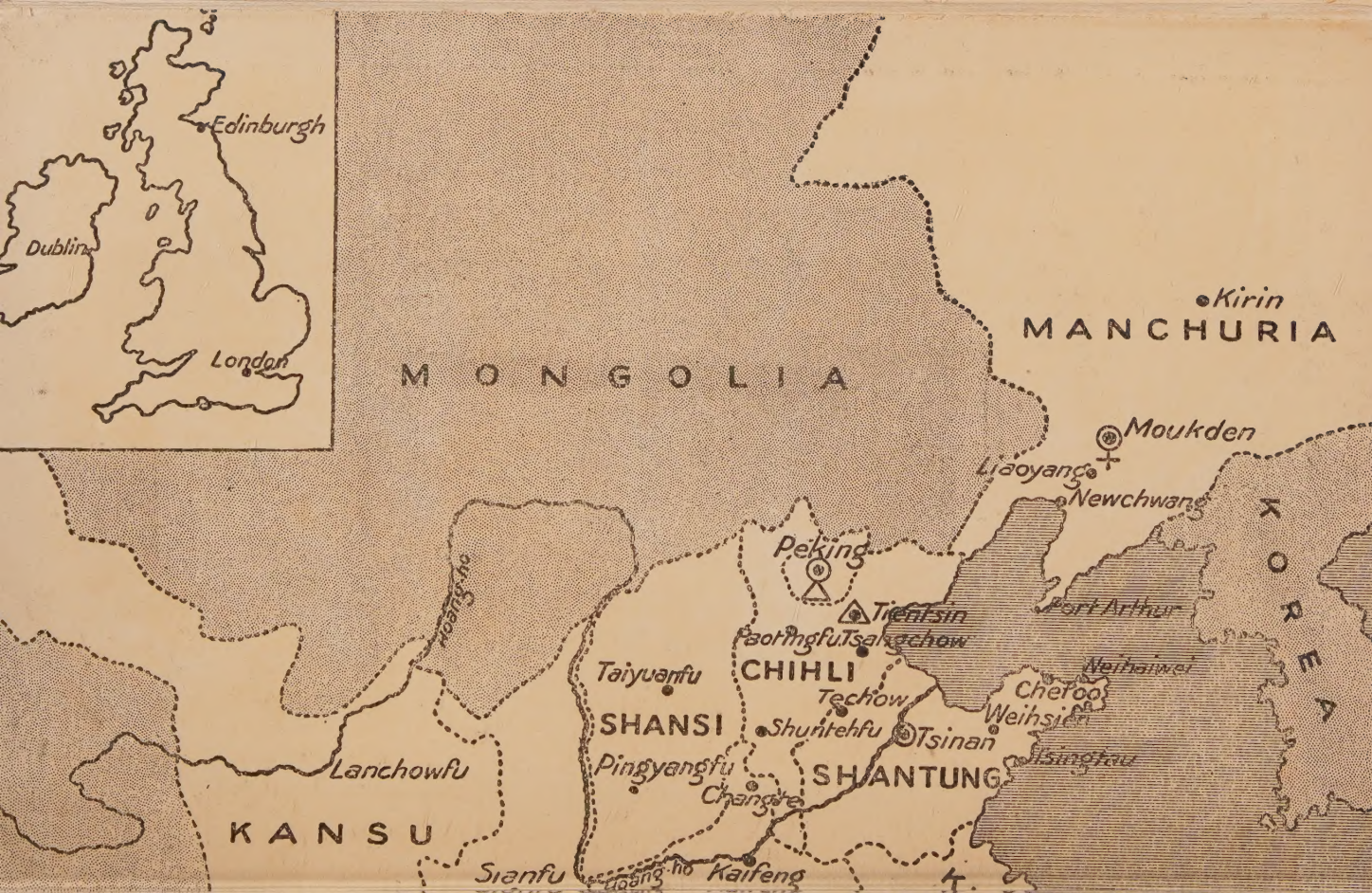
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